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NEW POSSIBILITIES OF ARTIFICIAL INTELLIGENCE IN WRITING ABSTRACTS

Abstract. The article explores effective ways to develop students' skills in writing abstracts by integrating artificial intelligence (AI) into the educational process. In today's education system, enhancing students' academic literacy is one of the key priorities. In particular, writing an abstract is a complex process that requires research abilities, critical thinking, working with information, and writing in an academic style. Alongside traditional methods, there is an increasing need to incorporate new digital tools, especially AI technologies.

The article examines the effectiveness of artificial intelligence and digital devices in the educational process, showing how they can develop the creative abilities of students and increase their interest in scientific research. The main goal of the article is to identify new opportunities for developing the skills of writing an abstract and the academic speech culture of students with the help of artificial intelligence. In this regard, the role of artificial intelligence (AI) tools in writing texts, conducting research, and shaping academic style is determined. The novelty of the research lies in the proposal of new methods based on the real application of the learning process using artificial intelligence.

Keywords: artificial intelligence, abstract, academic literacy, information technology, terminology, scientific communication, innovation.

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Introduction

In the modern education system, developing students' functional literacy as well as their cognitive and linguistic competencies is regarded as one of the key priorities. In this context, fostering students' ability to think critically in a scientific style and to express their viewpoints in a well-reasoned manner is becoming one of the pressing issues. This need is directly linked to the necessity of enhancing students' analytical and critical thinking skills, as well as their ability to work with information. The educational paradigm of the 21st century is measured not only by learners' acquisition of information, but also by their ability to use it competently in an academic context. The formation of academic literacy within the educational space is an important prerequisite for students' adaptation to higher education and the professional environment. Practical studies have shown that students face significant difficulties when completing academically oriented tasks and adhering to the stylistic norms of scientific language. This is associated with the complexity of the academic style, the lack of developed skills in using scientific terminology, and the inability to properly structure scientific works. Teaching students to write abstracts plays a particularly important role in developing their academic writing skills. Through writing an abstract, students learn the structure and stylistic features of scientific texts while developing their skills in analyzing and systematizing data. This process teaches students to conduct independent research, evaluate scientific information, and present it in clear and precise language. In addition, writing an abstract contributes to the formation of students' academic literacy, adherence to the norms of scientific language, and the enhancement of their logical thinking abilities. An abstract is a concise presentation of the essence of a particular issue or topic based on several scientific articles, books, monographs, and other information sources. In the abstract, the student must provide specific information related to the topic under consideration and be able to draw conclusions. Writing abstracts enables the student to fully cover the content of the given topic and to thoroughly analyze its main ideas and arguments. This process helps cultivate a research culture and fosters the development of scientific writing skills. Writing abstracts is an important academic research task aimed at developing students' abilities to organize, compare, evaluate, and analyze information. Teaching students to write abstracts, first of all, helps develop their research skills. It trains students to independently search for scientific sources, filter necessary information, read and analyze it, and use it appropriately for their purpose. Second, students learn to summarize scientific works. Instead of copying the text verbatim, they develop the ability to understand its content deeply, identify the main ideas, and rewrite them concisely and accurately. Third, it fosters self-monitoring and effective time management. Fourth, it develops the ability to create an outline and write a first draft. By creating an outline, students can organize the writing process in a systematic way. Fifth, students learn to edit and revise their abstracts. This improves the quality of their writing and strengthens their linguistic proficiency. These skills contribute not only to the development of students' academic writing competence but also to the enhancement of their linguistic, cognitive, and communicative competencies.

The active integration of information technologies into the modern educational space makes it possible to update the content of learning and to effectively incorporate digital tools into the teaching process. The primary requirement of the information society is to provide learners with fundamental knowledge of information literacy and to develop their ability to effectively use information technologies. Such preparation not only enhances students' information

literacy but also helps them adapt to the dynamic pace of contemporary society. The integration of information technologies into the educational process reinforces the demand for updating educational content and creates the need to develop students' academic writing skills through digital technologies.

In the current stage of the education system, the rapid development of digitalization requires the effective integration of new technological possibilities—particularly artificial intelligence (AI)—into the learning process. Ensuring the high-quality incorporation of artificial intelligence resources into the education system and improving effective methods of applying them in teaching are among the pressing and complex issues in modern education. AI is one of the essential tools for developing students' creative and research skills. In today's educational process, the integration of AI tools modernizes learning and plays an important role in developing students' academic writing skills. In forming the skill of writing abstracts, artificial intelligence serves as an effective tool for students in searching for and processing information. Through this process, students acquire the ability to write in a scientific style and express their ideas accurately and logically. AI helps students find scholarly works and articles, process information, and structure texts. With the help of artificial intelligence, students learn the norms of scientific language and develop the skill of correctly using terminology related to their research topic. In addition, through plagiarism-detection systems, AI checks the originality of texts and supports adherence to academic ethics. Thus, the above-mentioned capabilities of artificial intelligence make it an effective tool for improving the process of developing students' abstract-writing skills. The effective integration of AI into the learning process enhances the quality of education and increases students' productivity in scientific research activities. In this regard, there is a growing need to improve and implement pedagogical methods aimed at developing academic writing skills through the integration of artificial intelligence tools.

In his Address to the Nation, "Kazakhstan in the Era of Artificial Intelligence: Current Challenges and Solutions through Fundamental Digital Transformation," President Kassym-Jomart Tokayev set a strategically important goal for Kazakhstan to become a fully digital nation within three years. In this regard, he emphasized the significance of artificial intelligence, stating: "We must modernize the economy through widespread digitalization and the extensive introduction of artificial intelligence technologies. For this, first of all, we need to adopt the Digital Code as soon as possible. This law must define the main directions of the digitalization process, including artificial intelligence, platform-based economy, the use of big data, and other related issues" (Tokayev, 2025). The President also highlighted the necessity of establishing a Ministry of Artificial Intelligence and Digital Development, and instructed that specialists working in this field be trained. To this end, the Al-Sana program was launched, aiming to involve nearly 100,000 students in high-tech projects. However, taking into account that competence in working with artificial intelligence must be developed from school age, he stressed the need to create programs and educational materials on the fundamentals of AI for school students, as well as the importance of developing teachers' skills in using this technology. Creating a digital ecosystem for Kazakhstani science has become one of the most important priorities today. The use of artificial intelligence in education represents a new stage in the modernization of the educational system. With the help of AI, teachers can personalize the learning process and apply instructional methods tailored to the needs of each learner. In addition, artificial intelligence expands access to educational resources and contributes to improving the quality of education.

Research Materials and Methods

A number of theoretical and practical methods were used in the study. In writing the article, literature review, analysis, and synthesis methods were applied to examine the impact of artificial intelligence on the process of writing abstracts. The research methods employed made it possible to formulate scientifically grounded conclusions and helped assess the effectiveness of artificial intelligence in the educational process.

The article provides specific practical recommendations aimed at improving the quality of written work through the use of AI tools. During the study, a review was conducted of scientific works addressing the effectiveness of digital technologies in the learning process. Articles indexed in the Scopus database and studies by Kazakhstani scholars were used as the main sources of information. Based on these materials, conclusions were drawn describing the influence of artificial intelligence tools on the development of abstract-writing skills.

Literature Review

The integration of digital technologies into the educational process has drawn the attention of many scholars. In the works of domestic researchers such as Zh. Karaev, Zh. Sagaliyeva, B. Abyanova, G. Nurmanova, and others, the impact of digital technologies on education is thoroughly examined. In his study *"Aktivizatsiya poznavatel'noy deyatel'nosti uchashchikhsya v usloviyakh primeneniya kompyuternoy tekhnologii obucheniya"* (Karaev, 1994), scholar Zh.A. Karaev explores the theoretical and methodological foundations of enhancing students' cognitive activity through the use of computer-based learning technologies. In *"Digital Pedagogy in the Educational Space"* (Sagaliyeva, 2020), Zh.K. Sagaliyeva discusses the main directions of developing digital education in modern society, the role and place of digital pedagogy within the education system and in the broader scientific framework, the formation of digital pedagogy as a new field of pedagogical science, as well as issues related to personal development and digital learning didactics. In her dissertation *"Didactic Conditions for Enhancing Students' Cognitive Activity Through the Use of Computer Technologies"* (Abyanova, 2005), researcher B.T. Abyanova identifies the pedagogical and didactic conditions for increasing students' cognitive engagement through computer technologies. G.N. Nurmanova's dissertation *"Scientific and Methodological Foundations for Developing the Digital Competence of Philology Students in Teaching the Kazakh Language"* (Nurmanova, 2022) is devoted to exploring the scientific and methodological basis for cultivating digital competence among future teachers. The study provides an in-depth theoretical and methodological analysis of the role of digital technologies in the process of teaching the Kazakh language.

Teaching students to write an abstract is an important part of developing their academic literacy. In this regard, works devoted to the theoretical and practical foundations of academic literacy offer comprehensive insights into developing skills such as constructing academic texts, mastering the norms of scientific style, and systematically applying different types of writing. For example, in his works *"Academic Writing"* (Ospanov, 2018) and *"Fundamentals of Academic Writing"* (Ospanov, 2020), scholar E. Ospanov provides an in-depth analysis of the types and features of academic writing. These works comprehensively cover scientific and practical issues related to preparing and producing academic texts, offering clear guidance on how to process and manage informational data. They also address topics such as academic reading practices, choosing a topic, searching for information, the writing process, critical thinking, research methods, and data analysis. The books provide concrete methodological recommendations on

constructing scientific texts, presenting well-reasoned opinions, working with sources, making citations, and properly organizing the structure of written assignments. According to the author, academic writing is a means through which learners convey their scientific viewpoints, research findings, and critical judgments in a clear and structured manner. The key features of this type of writing include the use of scientific style, logical precision, terminological accuracy, and consistency. The work *"Theoretical and Practical Foundations of Academic Literacy"* by B. Dinayeva and S. Sapina (Dinayeva & Sapina, 2020) addresses the theoretical and practical aspects of academic literacy. The textbook outlines the methods and techniques for constructing academic texts in the Kazakh language. It describes the stages of writing scientific research papers, including choosing a research topic, identifying a problem, preparing and formatting research work, and analyzing the main genres of scientific writing.

Results and Discussion

Artificial intelligence is increasingly being used as an effective methodological tool aimed at developing learners' academic writing competence in the modern educational process, and its importance continues to grow. AI assists learners in creating outlines for research topics, collecting information, and analyzing data. Therefore, the integration of artificial intelligence into the educational process has become one of the most relevant issues today. Extensive research has been conducted globally on the use of AI in education. In their article *"The Influence of Artificial Intelligence on Education: Enhancing Personalized Learning Experiences,"* foreign scholars Edwin Frank and Emmanuel Ok analyze the impact of artificial intelligence on the learning process. They consider AI as a multifaceted approach to improving educational practices (Edwin & Emmanuel, 2024). In his study *"Generative AI and Education: A Symbiotic Relationship,"* Mr. Rahul Prabhakar Dhagare highlights the significant potential of generative artificial intelligence to revolutionize education. The study examines the interaction between technology and human creativity and proposes various ways generative AI can enhance teaching and learning (Rahul, 2024). In global research on the use of AI in education, several directions focus specifically on improving academic writing skills. The primary goal of these studies is to support learners in developing writing competence and strengthening written reasoning skills. The article *"Incorporating Peer Feedback in Academic Writing: A Systematic Review of Benefits and Challenges,"* published in *Frontiers in Psychology* (Wei & Liu, 2024) provides a comprehensive analysis of the advantages and challenges of peer feedback in developing academic writing. This systematic review covers over 60 empirical studies conducted between 2014 and 2023, recognizing peer feedback as an effective didactic tool for enhancing students' writing abilities. The article *"Teaching Pedagogies Using ICT in University Academic English Writing Across the Globe – A Systematic Literature Review"* by Liang Yingbao, Hanita Ismail, and Melor Yunus (Liang, Hanita & Melor, 2025) systematically examines effective pedagogical strategies for using ICT in developing academic writing skills. The authors aim to determine the impact of ICT on learners' writing abilities. Analyzing foreign research goes beyond simply collecting information; it allows us to identify scientifically grounded ways to adapt globally recognized effective pedagogical practices to the national education system. Such studies serve as important methodological and practical tools in addressing pressing issues such as increasing the efficiency of the learning process, accelerating the digitalization of education, and developing students' academic competence.

Therefore, integrating international best practices into the national educational context and scientifically adapting pedagogical innovations to local needs is one of the most effective ways to improve the quality of education.

Only a teacher who has mastered effective teaching methods can properly organize the learning process. Therefore, methodological preparation is an essential component of a teacher's professional competence. In his article "*Mektep Kerekteri*" (Baitursynuly, 2013), A. Baitursynuly emphasizes: "...first and foremost, what a school needs is a knowledgeable teacher who is well-versed in pedagogy and methodology and knows how to teach. Secondly, the tools necessary for teaching should be convenient and appropriate." Here, he highlights the importance of having a highly qualified and knowledgeable teacher and the role of educational tools in enhancing the learning process.

Educational tools are a vital part of the learning process, as they help students better understand and effectively master the material. The effectiveness of education largely depends on the harmonious combination of a professionally competent teacher and well-designed, suitable learning materials. In this regard, digital learning tools are an important resource that aligns with modern teaching methods, stimulates students' cognitive interest, and allows them to grasp material in a visual and interactive way. Digital tools play a particularly important role in developing students' writing skills. They facilitate processes such as text composition, editing, structuring, and detecting grammatical errors. Additionally, interactive platforms and AI-based applications contribute to the systematic improvement of students' academic writing abilities.

The writing process consists of several stages: *collecting information, planning its structure, drafting a first version, editing, and finalizing the text*. Each of these stages directly affects the quality of the written work. An abstract is a concise report that presents the content of a book, the results of a scientific study, or the conclusions of a research work on a specific topic. It is a written work of a scientific and informational nature, prepared on the basis of a review of literature and other materials related to a given topic. In an abstract, the topic is analyzed comprehensively and presented objectively, while scientific conclusions are examined, and critical evaluation is also reflected. The abstract is used to train students in scientific inquiry and analysis and to develop research skills.

The types of abstracts can be classified into productive and reproductive categories. Productive abstracts include *reports* and *reviews*, while reproductive abstracts include *summaries* and *structural abstracts*. In a productive abstract, the topic is presented critically and creatively. In a reproductive abstract, the content of the original text is conveyed. Depending on the degree of coverage of information and sources, abstracts can also be classified as *monographic, compilatory, selective, and review*. As Zhumabekova (2015) notes: "According to the degree of source coverage, abstracts are divided into monographic, compilatory, selective, and review abstracts. Monographic abstracts are based on a single source (material); compilatory abstracts use multiple articles, books, and documents; review abstracts are written as brief overviews on a specific topic or direction; selective abstracts are written on individual chapters, sections, or materials." Today, with the overwhelming flow of information, the ability to select, analyze, and systematize sources is extremely important. In this context, correctly distinguishing between the types of abstracts is not only fundamental to the process of scientific inquiry but also an important indicator of mastering the culture of academic writing. Teaching students to write selective or review abstracts helps develop their analytical skills and proficiency in writing in

an academic style. In this regard, an abstract is not merely a tool for presenting ready-made information; rather, it is an important academic genre that cultivates students' abilities in research, selection, analysis, synthesis, and summarization.

Writing abstracts is an intellectual and creative process for the student. Teaching students to write abstracts plays a significant role in developing their scientific writing skills. During the process of writing an abstract, students learn to write in accordance with the requirements of the scientific style. Through the use of terms and concepts applied in various scientific fields, students expand their vocabulary. While working with scientific literature, students acquire new words, phrases, and terminology. By writing an abstract, students develop scientific thinking and the fundamental skills of academic writing. They learn to support their arguments with precise evidence and to express their ideas in a logical and systematic manner. To prepare a high-quality abstract, it is necessary to master the main methods of analysis and synthesis, as well as to understand the primary requirements for an abstract, including its structural and functional features. Writing abstracts involves applying methods such as text composition, analysis, synthesis, critical evaluation, and conclusion. The process of writing abstracts consists of *preparation, execution, conclusion, and formatting stages*. The structure of abstracts can be organized according to the system presented in Table 1 below.

Table 1 – Structure of an abstract

No	Structure of an abstract	Description
1	Choosing a topic and determining the relevance of the research topic	The student first selects a scientific or research topic and collects information related to it. At this stage, they conduct academic inquiries and expand their knowledge by searching for the necessary data.
2	Introduction	In the introduction, the relevance of the topic, as well as the objectives and tasks of the research, are determined. The introduction also outlines the practical and theoretical significance of the study. In this section, the student explains the importance of the problem and identifies the main issues related to their research question.
3	Main body	The main body presents the core content of the research topic. In this section, these are substantiated, and comprehensive arguments are provided. The student's scientific viewpoints and opinions are expressed, various perspectives are compared, and the results of the research are presented.
4	Conclusion	In the conclusion, a summary of the research findings is provided, and the student's conclusions are presented. In this section, the student organizes their opinion and draws reasoned conclusions based on the data obtained during the research.

The National Corpus of the Kazakh Language, developed by the Akhmet Baitursynuly Institute of Linguistics, is one of the important scientific and innovative projects in the new stage of Kazakh linguistics. The corpus consists of several subcorpora (inner corpora), including the main corpus, oral subcorpus, dialectal subcorpus, cultural-representative subcorpus, terminological subcorpus, educational subcorpus, proverbs and sayings subcorpus, historical subcorpus, parallel subcorpus, writers' subcorpus, historical-poetic subcorpus, onomastic subcorpus, advertising texts subcorpus, Ahmet Baitursynuly subcorpus, phraseological subcorpus, contemporary poetry subcorpus, and others. By using these subcorpora, students develop skills

in referring to linguistic data, providing concrete examples, performing comparative analysis of textual material, and highlighting stylistic differences when writing abstracts. Moreover, the textual database of the National Corpus significantly contributes to the development of students' academic writing culture, the ability to express reasoned arguments, and the appropriate use of lexical and grammatical resources. From this perspective, the National Corpus of the Kazakh Language is not only a valuable tool for scientific research but also an effective digital resource for educational and methodological purposes.

In the modern education system, the effective use of digital resources has become an important tool for developing and enhancing students' academic literacy. Electronic databases such as *emle.kz*, *sozdikqor.kz*, *qazcorpora.kz*, *tilmedia.kz*, and *qazlatyn.kz*, developed by the *Til-Qazyna* National Scientific and Practical Center, provides excellent opportunities to master orthographic, grammatical, and lexical norms, as well as to adhere to the stylistic requirements of scientific language. Through these resources, students can develop skills in using terminology correctly, constructing sentences accurately, and organizing content logically during academic writing. QazGPT is one of the latest achievements in the field of artificial intelligence in Kazakhstan. Today, a generative AI platform called QazGPT, operating in the Kazakh language, has been launched. This platform is similar to the ChatGPT model but is specifically adapted for users working in Kazakh. QazGPT allows users to generate texts in Kazakh, get answers to questions, and complete various tasks based on linguistic analysis. The system fully accounts for the unique features of the Kazakh language and processes texts and statements accurately. The QazGPT platform significantly simplifies the process of obtaining answers to questions in Kazakh. It further develops the Kazakh language and expands its presence in the digital space. This technology represents a new facet of digital transformation in Kazakhstan and an important achievement in the development and implementation of artificial intelligence in the country. ChatGPT, developed by OpenAI, is a language model that operates based on artificial intelligence. It can conduct natural conversations in many languages and perform a variety of tasks. ChatGPT answers users' questions, writes texts, provides suggestions, assists in creative work, and explains educational materials. It is a tool capable of processing large amounts of information, answering diverse questions, and making analyses and conclusions on research topics. This virtual assistant helps students find information and solve problems efficiently.

Zotero and Mendeley are programs designed to organize scientific research, search for necessary scholarly materials, use them, and cite sources. They are extremely useful when writing an abstract, research article, or other academic texts. These tools allow researchers to save time during the writing process. Zotero and Mendeley can automatically process citations and easily generate bibliographies. Zotero is effective for organizing data and collecting important information related to a research project during scientific writing.

In the era of artificial intelligence, issues related to the Kazakh language remain highly relevant. Creating a national language model, automatic recognition of Kazakh texts, and Kazakh localization of digital content are among the main challenges today. The AI-based *Tilqazyna* Kazakh language teaching model can perform tasks such as generating texts in Kazakh, working with context, paraphrasing ideas, correcting grammatical and punctuation errors, translating terms, and explaining the meanings of phraseological expressions. Integrating digital resources and AI tools into the abstract writing process is one of the effective solutions for developing students' academic writing culture. These tools not only enhance the quality of the learning process but also play a significant role in expanding the scientific and academic use of the state

language. AI tools for academic writing and research include Zotero/Mendeley, Grammarly, ChatGPT (OpenAI), Turnitin, Nvivo, MAXQDA, Quirkos, Dedoose, Provalis Research, RapidMiner, and Google Scholar. Google Scholar, or the Kazakh version *Google Akademia*, is an academic text search engine provided by Google. It is an online platform for finding scientific articles, dissertations, books, conference materials, and other scholarly publications. Google Scholar serves as a key digital tool for students, researchers, educators, and scientists to search for information, conduct analyses, and work with sources. The purpose and functions of the Google Scholar platform are presented in Table 2 below.

Table 2 – Purpose and Functions of the Google Scholar Platform

Nº	Functions	Description
1	Searching for scientific articles	Allows searching by author, title, keywords, or journal name
2	Accessing the full text of articles	Provides access to the PDF version of the article
3	Creating citations	Automatically generates bibliographic citations in APA, MLA, and Chicago formats
4	Tracking citations	Shows how many times the article has been cited
5	Author profiles	Displays individual researcher profiles, publication lists, and h-index

Artificial intelligence (AI) is a technology that models human thinking abilities within computer systems. It is used in many fields by enhancing processes such as data analysis, natural language processing, and automation. *“In recent decades, the rapid development of online education has inevitably raised important questions regarding its quality and effectiveness, especially in terms of learning outcomes. Learning Management Systems (LMS), which enable the effective organization of the learning process in a digital environment, have strengthened their stable position as major innovations in university education”* (Kylyshpayeva, 2024). The digitalization of the education system is an effective way to modernize the learning process in accordance with contemporary requirements and to improve the quality of education. The use of digital technologies not only makes teaching more interactive and engaging but also creates conditions for learners to discover and develop their individual abilities. This process paves the way for introducing innovations in the field of education and contributes to enhancing its efficiency and quality. Therefore, the digitalization of the education system is considered an important factor in improving modern educational practices and a key element that meets the needs of the future.

In the modern education system, developing learners' scientific understanding, academic writing skills, and speech culture is one of the main objectives. To achieve this goal, a set of specialized methodological tasks is required. In particular, tasks aimed at writing an abstract, improving academic language and communication skills, as well as involving interactive forms of work, are becoming effective tools in teaching. Assignments designed for writing an abstract guide learners toward scientific inquiry. They help students develop essential skills such as collecting, selecting, structuring, paraphrasing information, and expressing personal viewpoints, rather than simply copying information. Below, we present a system of tasks that help learners acquire the skills necessary for writing an abstract.

- Tasks aimed at developing information-gathering skills help students work with scientific literature and learn to find relevant sources.

- Tasks for structuring the topic are designed to organize the logical content of the referat.

- **Writing annotations and summaries** teaches students to present the text briefly and accurately, that is, to express ideas concisely and clearly.

- **A citation (quote)** is the inclusion of an author's idea or opinion in your text, either verbatim or in a paraphrased form.

- **Answering specific questions while writing an abstract**, for example, searching for an answer to "Why is this topic important?", encourages students to think critically.

In the modern educational system, developing students' report-writing and academic writing skills is an essential process aimed at deepening their scientific understanding. A specially designed set of methodological tasks trains learners not only to work with texts but also to think independently, express opinions, and formulate well-reasoned conclusions. The tasks structured to develop report-writing skills during the learning process are presented in Table 3.

Table 3 – Types of tasks used to develop skills in writing an abstract (summary)

Nº	Methods and techniques	Description
1	Organizing a "web quest" using artificial intelligence	A <i>web quest</i> is an educational method that includes game elements and problem-based tasks completed through the use of online informational resources. The web quest is an innovative method that helps develop students' research skills. It makes the learning process and scientific inquiry more engaging and interactive. Through a web quest, students use online information resources to complete a given task. The term "web quest" (from English <i>web-quest</i>) means "internet search." A web quest is designed to activate students' participation in the learning process and to develop critical thinking. Completing a web quest teaches students to analyze and process information.
2	Developing vocabulary	Artificial intelligence offers new opportunities for developing vocabulary. It supports vocabulary expansion through interactive learning, text editing, audiovisual materials, and personalized learning plans. Tools such as ChatGPT and Sozdikqor.kz enable learners to identify the meanings, synonyms, and antonyms of new words.
2	Using artificial intelligence to provide quotations	Citing sources using artificial intelligence enhances the quality of academic work. Becoming familiar with citing through online resources such as Google Scholar, Kazneb.kz, Zotero, Mendeley, and others are essential. Reference managers like Zotero or Mendeley enable quick and automatic creation of citations and references.
3	Training in the correct use of terminology	Getting used to the correct use of terms is one of the most important skills in the course of academic literacy. The formation of this skill contributes to the high-quality writing of scientific works by students. The correct use of terminology helps the text to be legible and meet scientific requirements. Termincom.kz, the online database, is a website that provides detailed information about Kazakh terminology.
4	Synonym substitution	To develop students' vocabulary, synonym-search tasks are highly effective. Tools such as the Kazakh National Corpus (Qazcorpus.kz), Sozdik.kz, ChatGPT, QazGPT, and online "Synonymizer" services can be used to help learners identify and practice synonym sets.

To effectively use the capabilities of artificial intelligence in the formation of abstract writing skills, the following methodological recommendations can be introduced:

1. Systematic introduction of artificial intelligence tools into the educational process. ChatGPT, QazGPT, and others adapted to the Kazakh language for students *emle.kz*, *sozdikqor.kz*, *qazcorpora.kz*, *tilmedia.kz*, *qazlatyn.kz* teaching methods of writing abstracts using electronic databases, the national corpus of the Kazakh language. This ensures that students get used to structuring scientific texts, correcting grammatical and stylistic errors, and using terminology correctly.
2. Use of interactive learning technologies. Interactive presentation of learning materials using artificial intelligence (for example, Q&A sessions through a virtual assistant), contributes to the development of critical thinking and research skills in students.
3. Focus on improving the quality of artificial intelligence research work. Training in the use of intelligent means of artificial intelligence for collecting, systematizing and analyzing information in the process of writing an abstract or scientific work. This contributes to the systematic writing of research work by students, mastering the scientific style.
4. Formation of ethical and scientific literacy. To avoid plagiarism when using artificial intelligence, teach ethical standards aimed at the correct design of sources. The above recommendations will contribute to the full disclosure of the potential of artificial intelligence in the development of the culture of academic writing, as well as increase the scientific literacy and creative abilities of students.

The above recommendations contribute to the full disclosure of the potential of artificial intelligence in the development of the culture of academic writing, as well as increasing the scientific literacy and creative abilities of students.

In the course of the study, we were convinced that the use of artificial intelligence in the educational process is one of the tools for accessing new opportunities. As a result of the study, the role of artificial intelligence tools in the formation of abstract writing skills was comprehensively considered and their effectiveness in the field of education was determined. The capabilities of artificial intelligence in the educational process are not limited to technical means, but significantly contribute to the development of academic literacy of students. The results obtained during the study showed that artificial intelligence has a great contribution not only to facilitating the writing of written works, but also to improving the education system as a whole. Using these tools, students develop academic writing skills, as well as the ability to think in a scientific language, which, in turn, contributes to improving the quality of Education.

Artificial intelligence technologies help organize and structure information, making it easier to write abstracts. This has a positive effect on students developing research skills, mastering the scientific style and forming a culture of academic writing. Artificial intelligence is not only an effective tool in the field of education, but also an innovative technology that allows students to improve their academic writing skills.

Conclusion

In conclusion, in the modern education system, the role of artificial intelligence (AI) is of particular importance in developing students' academic writing skills. AI is capable of providing substantial support in analyzing and structuring texts, correcting grammatical errors, and generating creative work. Throughout the research, we found that the use of AI tools significantly improves the ability to organize the structure of a report, systematically build

content, and produce texts that meet academic standards. AI tools support every stage of the writing process—from analyzing the topic and identifying key ideas to establishing logical connections between sections. Artificial intelligence is effective not only in enhancing students' linguistic and grammatical competencies but also in developing their creative, logical, and research abilities. It improves the learning process by offering tasks tailored to individual needs and encouraging independent thinking and analysis. In this process, AI suggestions serve as guidance, helping learners form their own viewpoints. AI tools not only simplify the process of writing a report but also help make it more coherent and meaningful. They assist students in searching and organizing information, editing texts grammatically and stylistically, checking for plagiarism, and reflecting on their work.

Through the proper and effective use of AI tools, students not only improve their scientific writing skills but also elevate their critical thinking, creativity, and research abilities to a new level. This is one of the key ways to develop well-rounded individuals who can effectively use information—meeting the demands of 21st-century education. Thus, the competent and purposeful integration of artificial intelligence into the educational process will become the main mechanism for ensuring high-quality education and enhancing scientific potential in the future. Therefore, AI serves as an effective methodological tool that contributes to improving students' academic literacy in the process of writing a report.

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The authors declare no conflict of interest.

Contribution of the authors. M.A. Zhanzhakova collected, organized, and systematized the main materials and wrote the core part of the article. G.K. Zhylkybay analyzed the compiled materials, reviewed the relevant literature, and supervised the writing process. N.S. Khalikova conducted material analysis, contributed to the supplementation, and participated in the article's formatting and finalization.

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Реферат жазу дағдысын қалыптастыруда жасанды интеллект мүмкіндіктері

Аннотация. Мақалада жасанды интеллекттің (ЖИ) оқу үдерісіне интеграциялау арқылы оқушылардың реферат жазу дағдыларын қалыптастырудың тиімді жолдары қарастырылады. Қазіргі білім беру жүйесінде оқушылардың академиялық сауаттылығын арттыру маңызды міндеттердің бірі. Соның ішінде реферат жазу дағдысы – зерттеушілік қабілетті, сыни ойлауды, ақпаратпен жұмыс істеуді және ғылыми стильде жазуды талап ететін құрделі үдеріс. Бұл дағдыларды қалыптастыруда дәстүрлі әдістермен қатар, жаңа

цифрлық құралдарды, әсірсөз жасанды интеллект технологияларын тиімді қолдану қажеттілігі туындалған. Жасанды интеллект оқушыларға ақпаратты іздеу, талдау, құрылымдау, терминдерді дұрыс қолдану және академиялық талаптарға сай мәтін құрастырудың әдістемелік қолдау көрсете алады.

Мақалада жасанды интеллект пен цифрлық құрылғылардың білім беру үдерісіндегі тиімділігі талданып, олардың оқушылардың шығармашылық қабілеттерін дамыту, ғылыми зерттеулерге қызығушылығын арттыру жолдары көрсетіледі. Мақаланың негізгі мақсаты – жасанды интеллекттің көмегімен оқушылардың реферат жазу дағыларын қалыптастырудың жаңа мүмкіндіктерін анықтау. Бұл мақалада жасанды интеллект (ЖИ) құралдарының зерттеу жұмыстарын жүргізу және академиялық сауаттылықты қалыптастырудың рөлі айқындалады. Мақалада цифрлық технологияларды реферат жазуда қолданылуының практикалық маңыздылығы ашылып, тиімді әдіс-тәсілдер ұсынылды. Зерттеу барысында жасанды интеллект арқылы академиялық жазылымды қалыптастырудың әлемдік тәжірибесі мен жасанды интеллекттің Қазақстанның білім беру кеңістігіндегі түсінігі талданы. Оқушылардың академиялық сауаттылығын қалыптастыруға септігін тиізетін жасанды интеллект ресурстары жинақталып, олардың тиімділігі айқындалады. Мақала білім алушылардың сыни ойлауын, ақпараттық сауаттылығын және шығармашылық қабілеттерін дамытудағы жасанды интеллекттің әлеуетін ашуга бағытталған.

Түйін сөздер: жасанды интеллект, реферат, академиялық сауаттылық, ақпараттық технологиялар, терминология, ғылыми коммуникация, инновация.

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Новые возможности искусственного интеллекта в написании рефератов

Аннотация. В статье рассматриваются эффективные способы формирования у учащихся навыков написания рефератов путем интеграции искусственного интеллекта (ИИ) в образовательный процесс. В современной системе образования одной из важных задач является повышение академической грамотности учащихся. В частности, написание реферата представляет собой сложный процесс, требующий исследовательских способностей, критического мышления, умения работать с информацией и владения научным стилем.

В статье рассматривается эффективность искусственного интеллекта и цифровых устройств в образовательном процессе, показано, как они могут развивать творческие способности обучающихся и повышать их интерес к научным исследованиям. Актуальность темы статьи связана с развитием сферы образования в условиях цифровизации и инноваций. Основная цель статьи – выявление новых возможностей формирования навыков написание реферата и академической речевой культуры учащихся с помощью искусственного интеллекта. В связи с этим определяется роль инструментов искусственного интеллекта (ИИ) в написании текстов, проведении исследований и формировании академического стиля. Новизна исследования заключается в предложении новых методов, основанных на

реальном применении процесса обучения с помощью искусственного интеллекта. В статье представлены практическая значимость и эффективные методы использования цифровых технологий в процессе написания реферата. В результате исследования проанализирован мировой опыт написания эссе и формирования академической культуры речи с использованием искусственного интеллекта, а также концепция искусственного интеллекта в образовательном пространстве Казахстана.

Ключевые слова: искусственный интеллект, реферат, академическая грамотность, информационные технологии, терминология, научная коммуникация, инновация.

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