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CHAT GPT IN STUDENTS' RESEARCH: INTEGRATION AND IMPACT

*Bekkozhina Zh.A.[1], Yermaganbetova M.A.[2], Nezih Onal[3]
*[1,2]L.N. Gumilyov Eurasian National University, Astana, Kazakhstan
[3]Niğde Ömer Halisdemir University, Niğde, Türkiye

Abstract. The transition to research work in higher education presents significant challenges for students, particularly in terms of setting independent goals, analyzing scientific literature, formulating hypotheses, and interpreting results. The use of artificial intelligence tools such as Chat Generative Pre-trained Transformer (Chat GPT) has the potential to mitigate these difficulties by providing individualized support and improving the quality of students' scientific thinking. The purpose of this study is to analyze the possibilities of integrating Chat GPT as an auxiliary tool in the preparation and implementation of students' research papers. The study involved students of the L.N. Gumilyov Eurasian National University aged 17 to 20 years, enrolled in the educational program "6B01511- Computer Science". The study was performed using both quantitative and qualitative methods. A quasi-experimental design with elements of meta-analysis is applied quantitatively. The experimental groups included students using Chat GPT at various stages of research preparation, as well as those who worked with AI in collaboration with their supervisor. The control group consisted of students who performed work according to the traditional methodology. The Chat GPT 3.5 version was used in the experiment. As part of the qualitative analysis, hermeneutic phenomenology was used to study students' perceptions of the role of AI in scientific research. The results showed that Chat GPT contributes to the formation of the logical structure of the study, helps in the formulation of goals, annotations, and interpretations of the results. However, the role of the teacher as a supervisor, mentor, and critical reviewer remains key. It is recommended to use Chat GPT at the stages of literature search, text structuring, and preliminary analysis, while the active participation of the teacher is necessary to assess the scientific novelty and depth of the study of the topic.

Keywords: artificial intelligence (AI), Chat GPT, student research, quasi-experiment, meta-analysis, hermeneutical phenomenology, intelligent systems, scientific approaches

Introduction

The rapid development of digital and intelligent systems has significantly influenced all spheres of human activity, including education [1]. Despite the

wide integration of digital technologies into teaching practices, the use of artificial intelligence platforms such as Chat GPT in research training remains relatively underexplored. Given the increasing reliance on AI across disciplines, understanding its role in enhancing research thinking, analytical reasoning, and autonomous learning becomes crucial.

The global education crisis of 2020 became a catalyst for the widespread adoption of technology [2]. Technological solutions are generally aimed at achieving educational goals such as increasing engagement through interactivity, individualizing learning experiences, and enhancing feedback mechanisms [3] [4]. Within this context, artificial intelligence (AI) is viewed as an essential driver for improving accessibility, efficiency, and personalization in learning [5].

However, the integration of AI tools like Chat GPT into students' research work is not merely a matter of automation; it also raises pedagogical and ethical considerations. On the one hand, AI can help students overcome challenges in structuring scientific work, formulating research questions, and interpreting results. On the other hand, it requires critical supervision to maintain the depth and authenticity of academic inquiry.

This study aims to analyze the integration of Chat GPT as an auxiliary tool for preparing and conducting students' research projects, to evaluate its impact on research quality, and to identify students' perceptions of AI in the academic context.

Research questions include:

1. Are there statistically significant differences in research quality among students using Chat GPT independently, those using it under supervision, and those following the traditional approach?

2. What are students' perceptions of Chat GPT's role and value in their research experience?

Materials and methods

The research employed a mixed-methods approach combining quantitative quasi-experimental design and qualitative hermeneutic phenomenology, supplemented with a meta-analysis to enhance validity and generalizability.

Research Design

A quasi-experiment was conducted with three groups of Computer Science students (n = 30) from L.N. Gumilyov Eurasian National University aged 17–20 years:

- Experimental Group 1: students using Chat GPT autonomously;
- Experimental Group 2: students using Chat GPT under teacher supervision;
- Control Group: students completing research traditionally.

Each group worked independently with different supervisors to eliminate cross-influence. Version 3.5 of Chat GPT was used throughout the study.

Research Interaction Model

In the educational process, AI-mediated collaboration introduces a new triadic relationship among the student, teacher, and Chat GPT.

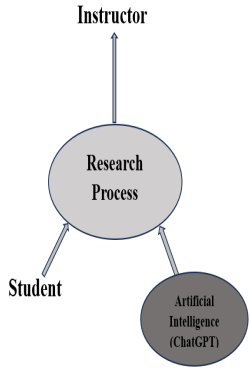

Figure 1 - Research interaction model

Firstly, from the point of view of functional characteristics, the natural language processing (NLP) technology underlying Chat GPT allows the system to understand students' requests in their native language. This makes interaction with the platform more accessible and relevant, especially when individual support is needed in the process of formulating scientific hypotheses, analyzing literature, and interpreting data. Secondly, Chat GPT provides a high level of accessibility, allowing students to access the resource at any time and from any device. This is especially important for students who need help outside the established academic schedule. Compared to other educational platforms such as Mendeley or Overleaf, Chat GPT can be used even from a smartphone. This mobility contributes to the formation of an inclusive educational environment and allows students to be involved in scientific activities regardless of time and place. According to Fichman, R. G. [6], technology plays an important role in the dissemination and assimilation of knowledge. The teacher acts as a translator and mediator in this process, while the student is an active participant in mastering the transmitted content. The object of the transfer is previously structured scientific knowledge that has undergone a process of pedagogical transformation. Within the framework of the research interaction model (see Figure 1), three key components are identified: the teacher, the student, and Chat GPT, which are interconnected. Each of the parties assumes a certain role in the process of scientific communication and knowledge exchange. These relationships can be analyzed both from the point of view of knowledge transfer and from the point of view of their assimilation by the student [7].

In the context of students' research activities, there is a need to rethink this extended model. In the proposed model, the key elements in the scientific training of students are:

– The student as the initiator and performer of research,

– The teacher (supervisor), as an expert leading the research,

Artificial intelligence (Chat GPT) is used as a digital assistant that supports students at the stages of analysis, reflection, and design of a scientific text .

In such a model, artificial intelligence acts not just as an automation tool, but performs the function of an expanded cognitive resource capable of enhancing the student's abilities to formulate ideas, process information, and write scientific texts [8] (see Figure 2).

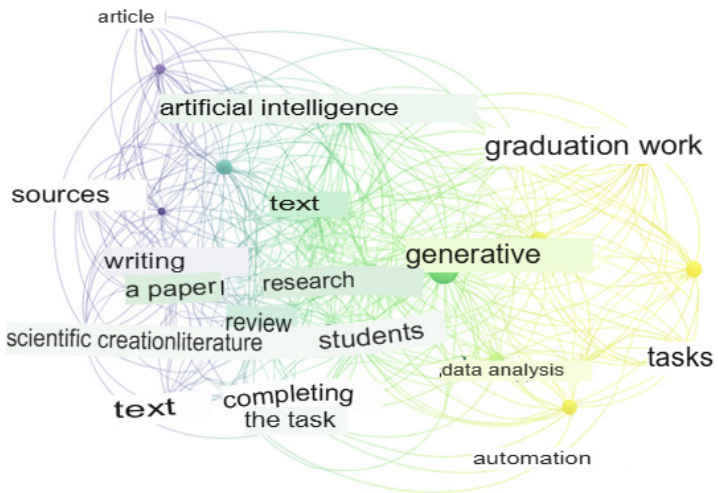

Figure 2 - Research interaction model

Quantitative Procedure

Students completed all stages of research preparation—from topic selection to result interpretation—under the assigned condition. Post-tests assessed research competence, analyzed using ANOVA for intergroup comparison. Sample power was validated via G*Power ($f = 0.6$, $\alpha = 0.05$, $1–\beta = 0.80$). The Cronbach's $\alpha = 0.755$, confirming internal consistency.

A meta-analysis of 19 studies (2013–2024) [9-11] was conducted using the PRISMA framework and the CMA software, identifying global trends in AI integration in student research.

Qualitative Procedure

To explore students' lived experiences, hermeneutic phenomenology was applied through semi-structured interviews ($n = 5$). The method emphasized interpretation of students' emotional, cognitive, and ethical perceptions when using AI tools. Data triangulation combined interview insights, observations, and quantitative outcomes for comprehensive validation.

Results

Quantitative Findings

Descriptive statistics revealed overall improvement in academic performance among both experimental groups compared to the control group. ANOVA results confirmed statistically significant differences ($p < 0.05$), indicating that Chat GPT integration positively affected research competence.

Table 1 - Input and output parameters (calculation of sample size in G*Power)

Parameters	*Input values*	*Output values*
Input data		
Effect size *f*	0.6	
Probability of error α	0.05	
Power (1–β mistake)	0.80	
Number of groups	3	
Output data		
The non-centralization parameter		10.800000
Critical value *F*		3.3541308
Total sample size		30
Actual capacity		0.80044441

Table 1 shows that when 30 participants were divided into three groups, the study reached the required statistical power level of 0.80. In scientific research, it is customary to set the power level at 0.80 or 80%, which means a 20% probability of erroneous acceptance of the null hypothesis ($\beta = 0.20$). In other words, there is a 20% risk of not detecting the existing effect.

The meta-analysis results reinforced these findings: studies consistently reported enhanced learning outcomes, improved text organization, and greater motivation among students using AI support. The combined effect size across studies was positive and statistically significant.

Figure 3 shows the distribution of Chat GPT usage across various industries, which makes it possible to visualize the scale of its implementation.

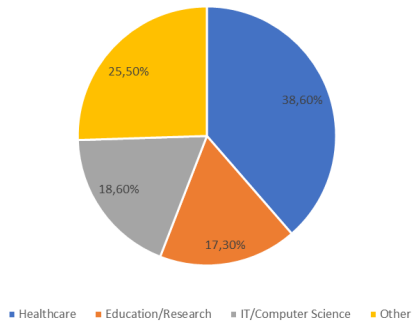

Figure 3 - Distribution of Chat GPT usage across different industries

Qualitative Findings

Interview analysis revealed several recurring themes:

• Increased Motivation – students reported a sense of empowerment when using Chat GPT for clarifying ideas and structuring texts.

• Improved Writing Confidence – many participants felt more capable of expressing research logic coherently.

• Dependence Concerns – some noted a risk of overreliance, emphasizing the irreplaceable role of the supervisor.

Phenomenological interpretation showed that students perceive Chat GPT not as a replacement for human mentorship but as a supportive partner enhancing the research process.

Challenges and Responsible Use of Chat GPT in Research Practice

Despite the obvious advantages of using Chat GPT in educational and research practice, its use requires caution and an informed approach. Some researchers point out the significant limitations of this technology, especially in the context of performing complex academic assignments. Thus, Gammoh, L. A. [12] note that Chat GPT demonstrates a limited understanding of individual academic fields and is not always able to adequately cope with students' misconceptions. The effectiveness and accuracy of the model's responses depend on the complexity of the task, the quality of the input data, and the clarity of the task. Similarly, Elsayed, H. [13] warns that AI models may give incorrect or incomplete answers, as well as use inappropriate methods to solve academic problems. Wineburg, M. S. [14] emphasizes the need for mandatory teacher participation in the process, especially in the absence of clear mechanisms for verifying the reliability of the information generated.

According to the study, about 89% of university students in Kazakhstan already use Chat GPT to complete educational and research assignments. Of these:

• 53% use Chat GPT to write scientific papers,

• 48% — during exams,

• 22% — for drawing up a structure or a research plan.

While such data demonstrates the widespread use of Chat GPT, it also raises concerns in the academic community. Scientists note that students' excessive dependence on AI can hinder the development of analytical and critical thinking, key competencies necessary for the full—fledged performance of research work.

The results of this study confirm the need for a balanced approach to integrating AI into the educational environment. For the most effective and safe use of Chat GPT in students' scientific work, the study also offers recommendations describing situations in which its use is appropriate, as well as limitations regarding the reliability and verification of the information received.

Results

The study involved 3rd-year students of the L.N. Gumilyov Eurasian National University aged 17 to 20 years, enrolled in the educational program "6B01511- Computer Science", students in pedagogical fields of study who have already completed a course on the basics of scientific research. The research focused on exploring the possibilities of integrating Chat GPT as an artificial intelligence tool into the process of preparing and implementing student research projects. The relevance of the topic choice is due to the fact that modern digital technologies, including AI, play a key role in the development of scientific and research activities of students, contributing to the formation of their skills of critical thinking, information analysis, and argumentation.

The total number of participants was 75 people (from the first year — 10, from the second year — 27, from the third year — 38). In order to ensure the geographical and cultural diversity of students, as well as to take into account different approaches to organizing students' research activities, students from different regions of the country (eastern, southern, and Central Kazakhstan) were selected. It was planned to form a sample of 30 respondents. The G*Power software product was used to accurately determine the required sample size, and the input and output parameters are shown in Table 1.

The sample distribution was as follows:

- The first experimental group consisted of 8 participants
- First University: 1 participant
- Second University: 3 participants
- Third University: 4 participants
- The second experimental group consisted of 12 participants
- First University: 2 participants
- Second University: 4 participants
- Third University: 6 participants
- Control group-10 participants
- First University: 1 participant
- Second University: 4 participants
- Third University: 5 participants

In terms of theoretical and methodological analysis, the study used a systematic review approach using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology, which includes four stages: identification, selection, assessment of suitability, and inclusion. As a result of the analysis, 19 scientific publications were selected on the impact of digital technologies on the development of students' research competencies in the field of computer science, including the use of AI and automated tools in the process of scientific research, data analysis, and software implementation.

As part of the qualitative stage of the study, a phenomenological methodology was applied, including in-depth interviews with five students who directly used Chat GPT in the course of academic and scientific work. The participants were selected using a criteria-based and snow-based sampling method, the main criteria of which were: participation in experimental classes with Chat GPT integration and the participants' ability to reflect and meaningfully describe their own experiences using artificial intelligence in research activities in the context of computer science.

From a quantitative point of view, a special final test was developed to assess students' learning outcomes, aimed at measuring the level of mastery of skills and knowledge after introducing Chat GPT into research activities. In order to ensure the reliability of the results, the researchers conducted a multi-step test validation procedure. At the first stage, the content of the test was sent for examination to specialists in the field of computer science and pedagogy to ensure its substantive validity and compliance with learning objectives. Then, a pilot test was conducted on a sample of 10 students to verify the reliability and clarity of the assignments. The reliability coefficient (Cronbach's alpha) was 0.755, which indicates an acceptable level of internal consistency of the test.

To analyze the data, descriptive statistics were calculated — the mean, standard deviation, and frequency distributions, which gave a general idea of the students' level of education. Next, methods of differential statistics were applied, in particular, univariate analysis of variance (ANOVA), to compare the average scores between the experimental and control groups.

In order to receive feedback on the perception of using Chat GPT in the course of research activities, students also filled out questionnaires reflecting their opinion and experience working with this AI tool.

At the meta-analysis stage, 19 scientific publications selected according to the PRISMA protocol were analyzed using the Comprehensive Meta-Analysis (CMA) program. This program allowed the researchers to determine the magnitude of the effect, as well as to present graphical visualizations and generalized trends within the framework of the compared studies. The combination of ANOVA and meta-analysis provided a deep and comprehensive verification of the research hypotheses: ANOVA allowed us to assess the impact of Chat GPT implementation within the current study, and meta-analysis confirmed the stability and generalizability of the results obtained in a broader context.

As part of the qualitative approach, the data triangulation method was applied, including the analysis of interviews, observations, and final test results. This approach ensured that the conclusions were verified by comparing different sources of information. Semi-structured interviews were conducted, as well as monitoring of students' learning activity while using Chat GPT.

The application of hermeneutical phenomenology has allowed for a deeper understanding of students' perceptions of Chat GPT's capabilities as an intellectual assistant in solving problems related to data analysis, programming, modeling, and other aspects of research work in the field of computer science. This approach revealed both the practical and subjective value of integrating AI into the educational process.

Table 2 - Differences between the three research methods

Aspect	Quasi-experimental design	Overview of meta-analysis	Hermeneutical phenomenology
Selection	30 students	19 scientific publications	5 students
Data collection	Final testing only	Scopus databases, Publish or Perish, doctoral dissertations	Semi-structured interviews
Criteria	Students of pedagogical fields aged 17-20 years	Inclusion criteria: (a) published in 2013-2024; (b) written in English	Students who participated in experimental classes with Chat GPT integration
Data analysis	ANOVA	CMA (Comprehensive Meta-Analysis)	Triangulation of data

The use of a qualitative research method in this study proved to be particularly valuable for studying aspects that cannot be fully reflected using purely quantitative methods. While the quantitative approach provides statistical data on measurable variables, qualitative methods allow deeper insight into the subjective experiences of participants, their perceptions, and attitudes toward the phenomenon under study.

Conclusion

The conducted research has demonstrated that the integration of Chat GPT into the preparation and implementation of students' research papers contributes to the formation of key components of research competence, such as the ability to formulate a scientific problem, substantiate a hypothesis, search for and critically analyze sources, as well as formalize the results of scientific research.

The quantitative results obtained based on the analysis of post-tests using the ANOVA method showed statistically significant differences between the control and experimental groups, which indicates the positive impact of using Chat GPT on students' academic achievements. This confirms the hypothesis that I-tools can serve as an effective means of supporting research activities in an educational environment.

A meta-analysis of scientific publications for the period 2013-2024 confirmed the steady interest of the scientific community in the issues of digitalization of education and the introduction of artificial intelligence into the educational process. The CMA program has revealed a positive generalized

effect from the use of such technologies in the development of research skills and cognitive activity of students.

Qualitative data obtained through semi-structured interviews revealed the subjective experiences and assessments of students related to the use of Chat GPT. Most of the participants noted an increase in motivation for research, increased confidence in completing difficult tasks, and improved academic writing skills. The hermeneutical analysis provided an opportunity to gain a deeper understanding of how students understand the role of AI in their own educational experience.

The complex application of quantitative and qualitative research methods has made it possible to comprehensively assess the impact of Chat GPT on the process of preparing students for scientific activity. The results obtained indicate the need for further implementation of intelligent digital tools in the educational practice of higher education, while special attention should be paid to the formation of students' critical attitude to information, digital ethics, and research culture.

REFERENCES

[1] Grigoriev, V. V., Loginov, E. L., & Loginova, V. E. Agent-based human interaction with the digital educational environment, based on a set of digital intelligent agents. //In Computer Applications for Management and Sustainable Development of Production and Industry (CMSD2021). – 2022. – Vol. 12251. – pp. 120-125.

[2] Teräs, M., Suoranta, J., Teräs, H., & Curcher, M. Post-Covid-19 education and education technology 'solutionism': A seller's market. // Postdigital Science and Education. – 2020. – vol. 2(3). – pp. 863-878.

[3] Sfintes, R., & Sfintes, A. I. Architectural technology: Education objectives. // In MATEC Web of Conferences EDP Sciences. – 2024. – Vol. 396. – p. 11002.

[4] Parmankulova P., Zholdasbekova S., Akhmetova E. Diagnosing the readiness level of future educators For inclusive teaching // «Bulletin of Ablai khan KazUIRandWL», Series "Pedagogical Sciences" – 2024. – No 4 (75) – pp. 129 – 143.

[5] Nurgali S., Alibayeva M., Uaidullakyzy E., Sargazin Zh. The role of artificial intelligence in teaching the language: challenges and prospects. //«Bulletin of Ablai khan KazUIRandWL», Series "Pedagogical Sciences" – 2025. – No 1 (76) – pp. – 401-415.

[6] Fichman, R. G. The diffusion and assimilation of information technology innovations //Framing the domains of IT management: Projecting the future through the past. – 2000. – Vol. 105127. – pp. 105-128.

[7] Pea, R. D. Socializing the knowledge transfer problem // International journal of educational research. –1987. – vol. 11(6). – pp. 639-663.

[8] Pedro, F., Subosa, M., Rivas, A., & Valverde, P. Artificial intelligence in education: Challenges and opportunities for sustainable development. – 2019. – Access mode - URL: https://www.gcedclearinghouse.org/sites/default/files/resources/190175eng.pdf [Date of access: 25.06.2025].

[9] Jukiewicz, M. The future of grading programming assignments in education: The role of Chat GPT in automating the assessment and feedback process // Thinking Skills and Creativity. – 2024. – vol. 52. – p. 101522.

[10] ElSayary, A. An investigation of teachers' perceptions of using Chat GPT as a supporting tool for teaching and learning in the digital era // Journal of computer assisted learning, – 2024. – vol. 40(3). – pp. 931-945.

[11] Khan, N., Khan, Z., Koubaa, A., Khan, M. K., & Salleh, R. B. Global insights and the impact of generative AI-Chat GPT on multidisciplinary: a systematic review and bibliometric analysis //Connection science. – 2024. – vol. 36(1). – p. 2353630.

[12] Gammoh, L. A. Chat GPT in academia: Exploring university students' risks, misuses, and challenges in Jordan // Journal of Further and Higher Education. – 2024. – vol. 48(6). – pp. 608-624.

[13] Elsayed, H. The Impact of Hallucinated Information in Large Language Models on Student Learning Outcomes: A Critical Examination of Misinformation Risks in AI-Assisted Education //Northern Reviews on Algorithmic Research, Theoretical Computation, and Complexity. – 2024. – vol. 9(8). – pp. 11-23.

[14] Wineburg, M.S. Evidence in teacher preparation: Establishing a framework for accountability //Journal of Teacher Education, – 2006. – vol. 57(1). – pp. 51-64.

СТУДЕНТТЕРДІҢ ЗЕРТТЕУ ЖҰМЫСЫНДА CHAT GPT: ИНТЕГРАЦИЯСЫ МЕН ӘСЕРІ

*Беккожина Ж.А.[1], Ермаганбетова М.А.[2], Nezih Onal[3]
*[1,2]Л.Н. Гумилев атындағы Еуразия ұлттық университеті,
Астана, Қазақстан
[3]Niğde Ömer Halisdemir University, Нигде, Түркия

Аңдатпа. Жоғары білім беруде ғылыми-зерттеу жұмыстарын орындауға көшу студенттер үшін, әсіресе өз бетінше мақсат қою, ғылыми әдебиеттерді талдау, гипотезаларды тұжырымдау және нәтижелерді түсіндіру бөлігінде айтарлықтай қиындықтар туғызады. Chat Generative pre-trained Transformer (Chat GPT) сияқты жасанды интеллект құралдарын пайдалану студенттерге жеке қолдау көрсету және ғылыми ойлау сапасын арттыру арқылы қиындықтарды азайтуға мүмкіндік береді. Бұл зерттеудің

мақсаты студенттердің ғылыми-зерттеу жұмыстарын дайындау мен жүзеге асыруда көмекші құрал ретінде Chat GPT интеграциясының мүмкіндіктерін талдау болып табылады. Зерттеуге Л.Н. Гумилев атындағы Еуразия ұлттық университетінің «6В01511-Информатика» білім беру бағдарламасы бойынша білім алатын 17-20 жас аралығындағы студенттері қатысты. Зерттеу сандық және сапалық әдістерді қолдану арқылы жүзеге асырылады. Мета-анализ элементтері бар квази-эксперименттік дизайн сандық түрде қолданылады. Эксперименттік топтарға ҒЗЖ дайындаудың әртүрлі кезеңдерінде Chat GPT қолданатын студенттер, сондай-ақ ғылыми жетекшімен бірге АИ-мен жұмыс істегендер кірді. Бақылау тобы ретінде дәстүрлі әдістеме бойынша жұмыс жасаған студенттер болды. Экспериментте Chat GPT 3.5 нұсқасы қолданылды. Сапалы талдау шеңберінде студенттердің ғылыми зерттеудегі AI рөлін қабылдауын зерттеу үшін герменевтикалық феноменология қолданылды. Нәтижелер Chat GPT зерттеудің логикалық құрылымын қалыптастыруға ықпал ететінін, мақсаттарды, аннотацияларды және нәтижелерді түсіндіруге көмектесетінін көрсетті. Оқытушының ғылыми жетекші, тәлімгер және сыни шолушы ретіндегі рөлі маңызды болып қала береді. Chat GPT-ті әдебиеттерді іздеу, мәтінді құрылымдау және алдын-ала талдау кезеңдерінде қолдану ұсынылады, ал оқытушының белсенді қатысуы тақырыптың ғылыми жаңалығы мен тереңдігін бағалау үшін қажет.

Тірек сөздер: жасанды интеллект (AI), Chat GPT, студенттердің ғылыми-зерттеу қызметі, квази-эксперимент, мета-анализ, герменевтикалық феноменология, интеллектуалды жүйелер, ғылыми тәсілдер

CHAT GPT В СТУДЕНЧЕСКИХ ИССЛЕДОВАНИЯХ: ИНТЕГРАЦИЯ И ВЛИЯНИЕ

*Беккожина Ж.А.[1], Ермаганбетова М.А.[2], Nezih Onal[3]
*[1,2] Евразийский национальный университет имени Л.Н. Гумилева, Астана, Казахстан
[3]Niğde Ömer Halisdemir University, Нигде, Турция

Аннотация. Переход к выполнению научно-исследовательской работы в высшем образовании представляет значительные трудности для студентов, особенно в части самостоятельной постановки целей, анализа научной литературы, формулирования гипотез и интерпретации результатов. Использование инструментов искусственного интеллекта, таких как Chat Generative Pre-trained Transformer (Chat GPT), обладает потенциалом смягчить данные трудности за счёт предоставления индивидуализированной поддержки и повышения качества научного мышления студентов. Целью данного исследования является анализ возможностей интеграции Chat GPT как вспомогательного инструмента в подготовке и реализации научно-

исследовательских работ студентов. В исследовании приняли участие студенты Евразийского национального университета им. Л.Н. Гумилева в возрасте от 17 до 20 лет, обучающиеся по образовательной программе «6B01511-Информатика». Исследование выполнено с применением как количественных, так и качественных методов. Количественно применён квази-экспериментальный дизайн с элементами метаанализа. Экспериментальные группы включали студентов, использующих Chat GPT на различных этапах подготовки НИР, а также тех, кто работал с ИИ совместно с научным руководителем. В качестве контрольной группы выступали студенты, выполнявшие работы по традиционной методике. Версия Chat GPT 3.5 использовалась в эксперименте. В рамках качественного анализа применялась герменевтическая феноменология для изучения восприятия студентами роли ИИ в научном исследовании. Результаты показали, что Chat GPT способствует формированию логической структуры исследования, помогает в формулировке целей, аннотаций и интерпретаций результатов. Однако роль преподавателя как научного руководителя, наставника и критического рецензента остаётся ключевой. Рекомендуется использовать Chat GPT на этапах поиска литературы, структурирования текста и предварительного анализа, при этом активное участие преподавателя необходимо для оценки научной новизны и глубины проработки темы.

Ключевые слова: искусственный интеллект (ИИ), Chat GPT, научно-исследовательская деятельность студентов, квази-эксперимент, метаанализ, герменевтическая феноменология, интеллектуальные системы, научные подходы

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Information about authors:

Bekkozhina Zhanargul Amangeldievna – L.N. Gumilyov Eurasian National University, 2 st year doctoral student of the specialty «8D01511 – Computer Science», e-mail: janargyl@mail.ru, https://orcid.org/0009-0000-2276-2792

Yermaganbetova Madina Askarovna – candidate of pedagogical sciences, L.N. Gumilyov Eurasian National University, associate professor department of Computer Science, e-mail: madinaerm@mail.ru, https://orcid.org/0000-0002-8147-0383

Nezih Önal - Professor Dr. Department of Special Education, Faculty of Education, Niğde Ömer Halisdemir University, e-mail: nezihonal@ohu.edu.tr, https://orcid.org/0000-0002-1103-8771

Авторлар туралы мәлімет:

Беккожина Жанаргуль Амангельдиевна – Л.Н. Гумилев атындағы Еуразия ұлттық университеті, Информатика кафедрасының «8D01511 – Информатика» білім беру бағдарламасының 2 курс докторанты, e-mail: janargyl@mail.ru, https://orcid.org/0009-0000-2276-2792

Ермаганбетова Мадина Аскаровна – п.ғ.к., Л.Н. Гумилев атындағы Еуразия ұлттық университеті, Информатика кафедрасының қауымдастырылған профессор, e-mail: madinaerm@mail.ru, https://orcid.org/0000-0002-8147-0383

Nezih Önal - Professor Dr. Department of Special Education, Faculty of Education, Niğde Ömer Halisdemir University, e-mail: nezihonal@ohu.edu.tr, https://orcid.org/0000-0002-1103-8771

Информация об авторах:

Беккожина Жанаргуль Амангельдиевна – Евразийский национальный университет имени Л.Н. Гумилева, докторант 2 курс по ОП «8D01511 – Информатика», e-mail: janargyl@mail.ru, https://orcid.org/0009-0000-2276-2792

Ермаганбетова Мадина Аскаровна – к.п.н., Евразийский национальный университет имени Л.Н. Гумилева, ассоциированный профессор кафедрой информатики, e-mail: madinaerm@mail.ru, https://orcid.org/0000-0002-8147-0383

Nezih Önal - Professor Dr. Department of Special Education, Faculty of Education, Niğde Ömer Halisdemir University, e-mail: nezihonal@ohu.edu.tr, https://orcid.org/0000-0002-1103-8771