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THE ROLE OF HEURISTIC AND AI TECHNOLOGIES IN ENHANCING STUDENTS' RESEARCH COMPETENCE: ANALYTICAL RESULTS OF A SURVEY

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In the context of rapidly changing educational paradigms and the increasing digitalization of learning, the development of students' research competence has become one of the key challenges in higher education. Traditional teaching methods often fail to foster inquiry-based thinking and independent problem-solving, making it necessary to explore innovative approaches that combine human creativity and technological support. The use of heuristic AI technologies in teacher education is highly relevant, as such tools stimulate exploratory thinking, support research-oriented learning, and help future teachers develop analytical and digital skills required in modern educational practice. This article presents the analytical results of a student survey aimed at exploring the role of heuristic and artificial intelligence (AI) technologies in developing research competence among university students. The study involved undergraduate students from the pedagogical faculty who participated in an online questionnaire assessing their attitudes toward research activities, understanding of research competence, and experience with heuristic and AI-based learning tools. The findings reveal that most respondents show a positive attitude toward research, acknowledging the effectiveness of heuristic methods such as creative inquiry, problem-based learning, and guided discovery. Students also reported that AI tools assist in data analysis, information retrieval, and generating feedback that supports autonomous learning. The results highlight the relevance of integrating heuristic and AI-driven

technologies in higher education as a way to enhance students' motivation, reflective thinking, and independent research skills–critical components of professional and academic growth in the modern digital era.

Keywords: *research competence, heuristic technologies, artificial intelligence, higher education, student survey, analytical study.*

ЭВРИСТИКАЛЫҚ ЖӘНЕ ЖАСАНДЫ ИНТЕЛЛЕКТ ТЕХНОЛОГИЯЛАРЫНЫҢ СТУДЕНТТЕРДІҢ ЗЕРТТЕУ ҚҰЗЫРЕТТІЛІГІН АРТТЫРУДАҒЫ РӨЛІ: САУАЛНАМА НӘТИЖЕЛЕРІНІҢ ТАЛДАУЫ

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Мақалада эвристикалық және жасанды интеллект технологияларының университет студенттерінің зерттеу құзыреттілігін қалыптастырудағы рөлін анықтауға бағытталған студенттер сауалнамасының аналитикалық нәтижелері ұсынылған. Зерттеуге педагогика факультетінің студенттері қатысып, зерттеу әрекетіне көзқарасы, зерттеу құзыреттілігі туралы түсінігі және эвристикалық пен ЖИ құралдарын қолдану тәжірибесі туралы онлайн сауалнама толтырды. Нәтижелер көрсеткендей, респонденттердің басым бөлігі зерттеу қызметіне оң көзқарас танытып, шығармашылық ізденіс, проблемалық оқыту және бағытталған ашу сияқты эвристикалық әдістердің тиімділігін атап өтті. Сондай-ақ студенттер ЖИ құралдарының деректерді талдауға, ақпарат іздеуге және автономды оқытуды қолдайтын кері байланыс қалыптастыруға көмектесетінін көрсетті. Зерттеу нәтижелері эвристикалық және ЖИ технологияларын жоғары білім беру жүйесіне енгізудің студенттердің мотивациясын, рефлексивтік ойлауын және дербес зерттеу дағдыларын дамытудағы маңыздылығын айқындайды. Бұл құзыреттер цифрлық дәуір жағдайында кәсіби және академиялық дамудың маңызды компоненттері болып табылады, сонымен қатар білім алушылардың сыни ойлау қабілетін жетілдіруге, ғылыми ізденіске тұрақты қызығушылық қалыптастыруға және заманауи білім беру ортасына тиімді бейімделуіне ықпал етеді, білім беру үдерісінің сапасын арттыруға және инновациялық педагогикалық тәжірибелерді кеңінен енгізуге мүмкіндік береді.

Түйінді сөздер: *зерттеу құзыреттілігі, эвристикалық технологиялар, жасанды интеллект, жоғары білім, студенттер сауалнамасы, аналитикалық зерттеу.*

РОЛЬ ЭВРИСТИЧЕСКИХ И AI-ТЕХНОЛОГИЙ В ПОВЫШЕНИИ ИССЛЕДОВАТЕЛЬСКОЙ КОМПЕТЕНЦИИ СТУДЕНТОВ: АНАЛИТИЧЕСКИЕ РЕЗУЛЬТАТЫ ОПРОСА

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В статье представлены аналитические результаты опроса студентов, направленного на изучение роли эвристических и искусственно-интеллектуальных технологий в развитии исследовательской компетенции обучающихся вузов. В исследовании приняли участие студенты педагогического факультета, заполнившие онлайн-анкету, включающую вопросы об отношении к исследовательской деятельности, понимании сущности исследовательской компетенции и опыте использования эвристических и AI-инструментов в обучении. Полученные результаты показывают, что большинство респондентов положительно относятся к исследовательской деятельности, отмечая эффективность эвристических методов, таких как творческий поиск, проблемное обучение и направляемое открытие. Студенты также указали, что AI-инструменты помогают в анализе данных, поиске информации и формировании обратной связи, поддерживающей автономное обучение. При этом выявлено, что наибольший образовательный эффект достигается при комплексном применении обоих подходов: эвристические методы активизируют творческое и критическое мышление, тогда как AI-технологии обеспечивают оперативную поддержку, адаптацию учебного контента и персонализацию образовательного маршрута каждого студента. Исследование также фиксирует положительное влияние интеграции данных технологий на формирование навыков самоорганизации, целеполагания и рефлексии – качеств, необходимых совре-

менному специалисту. Практическая значимость работы состоит в возможности использования полученных данных при проектировании образовательных программ и разработке методических рекомендаций для преподавателей высшей школы. Результаты исследования подчёркивают значимость интеграции эвристических и AI-технологий в высшем образовании как средства повышения мотивации, развития рефлексивного мышления и формирования самостоятельных исследовательских навыков – критически важных компонентов профессионального и академического развития в условиях цифровой эпохи.

Ключевые слова: *исследовательская компетенция, эвристические технологии, искусственный интеллект, высшее образование, опрос студентов, аналитическое исследование.*

Introduction. The transformation of modern education under conditions of digitalization and rapid technological development has significantly increased the importance of fostering students' research competence. Contemporary higher education systems require future teachers not only to master subject knowledge but also to demonstrate critical thinking, creativity, and the ability to conduct independent research. In this context, artificial intelligence (AI) and heuristic learning are increasingly recognized as effective pedagogical tools that support inquiry-based learning and enhance students' research autonomy.

Heuristic technologies can be understood as a set of methods and procedural strategies aimed at finding effective solutions in situations characterized by uncertainty, contradictions, or incomplete information, where strictly algorithmic approaches prove insufficient. According to Altshuller's theory of inventive problem solving (ASIP/TRIZ), heuristic procedures support creative thinking by helping individuals overcome psychological inertia, identify contradictions, and generate innovative solutions through guided problem transformation [1, pp. 36-45; 2].Within artificial systems, heuristic approaches are widely used to optimize search processes, improve decision-making, and reduce computational complexity [3, pp. 29-30]. From a pedagogical perspective, they foster exploratory thinking and support knowledge construction through problem-solving rather than passive reproduction of information, thereby contributing to the development of research competence.

A number of studies have examined the application of generative artificial intelligence tools in foreign language education at secondary and higher education levels [4-7; 12-16]. These studies focus on chatbot-based interaction, adaptive learning systems, and AI-supported language acquisition (Devedzic [3]; Çakmak [5]; Han [6]; Sysoyev & Filatov [7, pp. 206-208]; Okonkwo & Ade-Ibijola [8]; Pokrivcakova [13]; Roll & Wylie [14]; Chen et al. [16], among others).

Empirical findings by Sysoyev [9, p. 205] indicate that, at the present stage, secondary school pupils and university students often demonstrate a higher level of proficiency in AI tools than their teachers. Therefore, instead of delegating cognitive and creative tasks entirely to AI, there is a growing need to prepare educators capable of effectively integrating the didactic potential of artificial intelligence into everyday teaching practice. In this regard, teacher education should develop along two interrelated directions.

On the one hand, AI tools should be integrated into the teaching practice of subject-specific disciplines, as well as into students' practical and research work. This approach enables them, first, to gain a deeper understanding of the studied material, and second, to experience and reflect upon the process of learning interaction with AI from the position of a learner – understanding what such interaction provides and how it transforms the learning experience, including through the use of AI-based communicative environments such as Character.AI [10, p. 1252].

On the other hand, the training of future teachers should include the development of methodological and reflective competencies that allow them to consciously design and implement AI-based learning scenarios. This involves understanding the ethical, pedagogical, and technological dimensions of AI use in education, as well as the ability to critically assess the outcomes of human–AI collaboration. Future teachers must be able not only to use AI tools but also to evaluate their pedagogical relevance, adapt them to the learning context, and ensure that they support rather than replace human creativity and critical thinking. In this dual approach – combining experiential learning with methodological reflection – lies the key to forming teachers capable of integrating artificial intelligence into the educational process responsibly and effectively.

It is evident that such comprehensive training is feasible only when a holistic methodological system for preparing future teachers is built upon artificial intelligence technologies.

Recent pedagogical literature reflects growing interest in AI within teacher education, yet most studies focus either on particular AI tools or on specific didactic functions to be incorporated into teacher training. For example, Viviana Alexandrowicz [11, p. 347] highlight the didactic potential of generative AI – from data analysis to automated assessment – arguing that its integration can support personalized learning and streamline monitoring of students' progress. Likewise, Celik et al. [12] emphasize that modern educators must learn to use AI for lesson planning, automated evaluation of creative work, and for providing feedback in project-based learning.

According to Pokrivcakova [13, p. 137], AI-powered technologies play an essential role in preparing teachers for modern foreign language education by supporting personalized instruction, automated assessment, and innovative pedagogical strategies. Similarly, Roll and Wylie [14, p. 583] describe the evolution of artificial intelligence in education as both revolutionary and evolutionary, emphasizing the shift from

traditional computer-assisted instruction toward intelligent systems capable of adapting to learners' needs and supporting complex cognitive development.

From a technological perspective, Devedzic [3, p. 36] explains AI as a system designed to simulate human cognitive functions such as reasoning, learning, and problem solving, which enables the creation of intelligent tutoring systems and adaptive learning environments. Complementing this view, Coppin [15, pp. 8-12] highlights AI as a field focused on modelling intelligent behavior and building systems that support decision-making and learning processes. Whitby [4] further emphasizes the broader social and philosophical implications of AI, stressing the importance of AI literacy for educators and students as intelligent systems increasingly influence knowledge production and educational interaction.

Together, these studies demonstrate that artificial intelligence contributes to the modernization of education by enhancing personalization, supporting teachers' professional development, and transforming traditional models of teaching and learning.

The aim of the study is to investigate students' attitudes toward research activity and to examine the effectiveness of heuristic and artificial intelligence technologies in the development of research competence among future teachers.

The objectives of the study are as follows:

1. To assess students' attitudes and motivation toward research activities in the context of AI-supported learning;
2. To examine students' understanding and awareness of heuristic technologies and artificial intelligence in educational practice;
3. To evaluate students' practical skills in applying AI tools and heuristic methods in research tasks;
4. To identify the level of students' reflective and critical thinking when working with AI-generated content;
5. To determine the pedagogical conditions that promote the effective integration of heuristic and AI technologies in the formation of research competence among future foreign language teachers.

Methodology. A quantitative study was constructed using a structured questionnaire to evaluate students' perceptions of the formation of research competence and their use of heuristic and AI-based technologies in the learning process. The participants were fourth-year students of the pedagogical faculty enrolled in the discipline "Specialized Professional Foreign Language (SPYA)". The questionnaire was distributed online during the autumn semester (October) of the 2025-2026 academic year. Participation was voluntary and anonymous, and students completed the survey within approximately 10-12 minutes. The total number of participants was 60 students.

The choice of fourth-year foreign language teacher education students was intentional. At this stage, students already have basic pedagogical and methodological preparation and are actively involved in research activities such as course projects, teaching practice, and thesis preparation. As future foreign language teachers, they need not only subject knowledge but also research competence and the ability to use innovative technologies in their professional work. Therefore, studying this group makes it possible to evaluate how prepared future teachers are for research activity and for developing critical thinking and inquiry skills in their future learners.

The instrument included items related to the frequency and purpose of AI tool usage, the ability to apply heuristic approaches to problem-solving, and students' self-assessment of their research competence development.

In this study, artificial intelligence is considered not as a substitute for students' thinking but as a cognitive support tool that enhances independent research activity. Contemporary higher education requires students to formulate research questions, analyze information critically, and construct knowledge autonomously; therefore, combining heuristic learning methods with AI technologies supports the development of research competence among future foreign language teachers.

Students used AI tools such as Claude, Perplexity AI, and ChatGPT to clarify research topics, refine questions, and compare academic sources through dialogic interaction. This process helped reduce uncertainty at the initial stages of research design. AI-supported mind mapping with Miro enabled students to visualize ideas, structure theoretical concepts, and organize academic writing more effectively. The Socratic dialogue approach, implemented through AI interaction, encouraged reflective questioning, deeper reasoning, and critical evaluation rather than passive reception of ready answers. In addition, heuristic techniques based on analogy and metaphor supported creative thinking and facilitated understanding of complex theoretical concepts.

The methodological framework also included surveys and reflective discussions aimed at examining students' experiences of AI use in academic writing, including frequency of use, perceived usefulness, and its influence on research independence and academic responsibility.

The data were collected through an online questionnaire entitled "Formation of Research Competence through AI and Heuristic Technologies", designed to measure students' motivation, cognitive awareness, operational skills, reflective evaluation, and emotional-value attitude related to AI-assisted research learning. The questionnaire consisted of three main sections: students' attitudes toward research activities; their

understanding of research competence; and their experience and opinions on heuristic and AI technologies in education, which were further structured according to four diagnostic blocks:

1. **Motivational block** – examined students' interest, engagement, and internal motivation toward research and the use of AI tools.
2. **Cognitive block** – assessed their understanding of AI concepts, heuristic technologies, and digital research methods.
3. **Procedural block** – assessed students' ability to apply research methods and AI tools in practice.
4. **Reflective-Evaluative block** – focused on students' ability to analyze, critique, and assess AI-generated information.

The Likert five-point scale (from 1 – Strongly disagree / Very low to 5 – Strongly agree / Very high) was used to measure responses. This structure ensured a comprehensive evaluation of how effectively heuristic and AI-based technologies contribute to forming students' research competence.

Overall, the methodology integrates heuristic pedagogy with artificial intelligence tools, treating AI as an intellectual partner that supports exploration, reflection, and the gradual formation of research competence while maintaining human control and critical thinking.

Results. The collected data were analyzed using descriptive statistics, and the results were visualized through charts and diagrams to identify general tendencies and correlations.

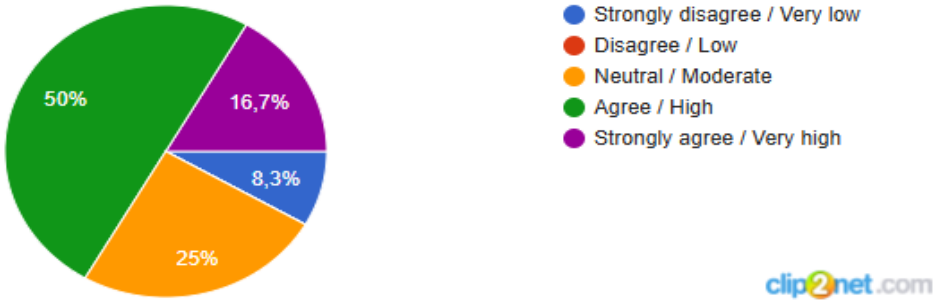

Figure 1 – Developing research competence is important for my future career

The results presented in Figure 1 reflect students' perceptions of the statement *"Developing research competence is important for my future career."* The data show a clearly positive attitude among the majority of respondents: 50% selected the "Agree / High" option, and an additional 16.7% chose "Strongly agree / Very high." This means that two-thirds (66.7%) of students explicitly recognize the relevance of research competence for their professional trajectory.

A quarter of the respondents (25%) reported a neutral position, which may indicate either a lack of awareness of how research skills translate into career benefits or uncertainty regarding their future professional pathway. Only 8.3% expressed a very low level of agreement, and no respondents chose a low ("Disagree") rating. Such a distribution suggests that negative or skeptical attitudes toward the importance of research competence are marginal within the surveyed group.

Overall, the findings confirm that students largely acknowledge the role of research competence as a meaningful component of their future professional development, which justifies the need to integrate targeted pedagogical strategies for cultivating these skills within higher education programs.

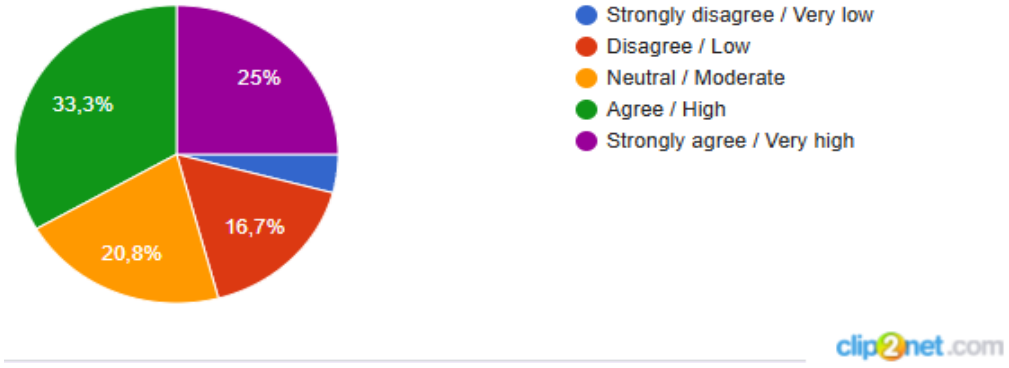

Figure 2 – I feel inspired when I do research using heuristic prompting with AI tools (Claude, Perplexity, ChatGPT)

Figure 2 illustrates students' responses to the statement "I feel inspired when I do research using heuristic prompting with AI tools (Claude, Perplexity, ChatGPT)". The distribution of responses indicates that a considerable proportion of participants experience a positive motivational effect when interacting with AI

technologies. In particular, one-third of the respondents (33.3%) agreed with the statement, while an additional 25% strongly agreed, resulting in 58.3% of the sample expressing a high or very high level of inspiration.

At the same time, 20.8% of students remained neutral, which may suggest that for some respondents AI tools act more as functional instruments rather than emotional or motivational drivers. A relatively small share of participants reported low (16.7%) or very low (4.2%) levels of inspiration, indicating that negative attitudes toward the use of AI in the research process are not predominant.

Overall, these findings demonstrate that more than half of the surveyed students associate AI-based tools with increased inspiration and engagement in research activities, which highlights the motivational potential of integrating AI technologies into educational practices that aim to foster research competence.

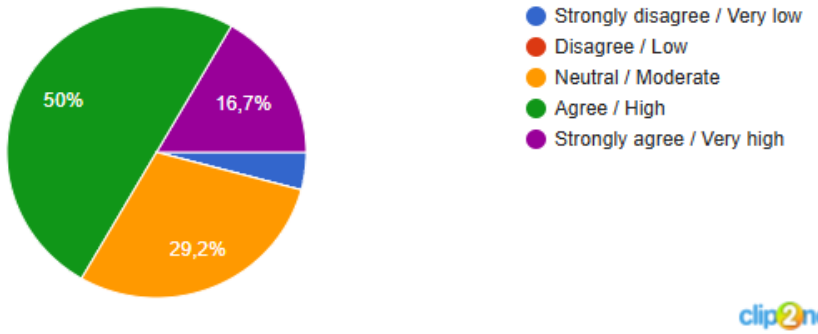

Figure 3 – I apply heuristic AI methods (Mind Mapping AI, Socratic AI dialogue) in research

The obtained distribution of responses suggests that the majority of students consciously integrate heuristic strategies such as brainstorming or analogy-based reasoning when using digital or AI-supported tools. In particular, 50% of respondents indicated a high level of agreement with this statement, while an additional 16.7% expressed very high agreement. This implies that two thirds of the sample already demonstrate a solid alignment between heuristic thinking and technological mediation in research tasks. At the same time, 29% reported only a moderate level of agreement, which may indicate either partial or situational use of such strategies, pointing to a potential area for pedagogical strengthening.

Table 1 – Descriptive statistics of students' research competence components in AI-sup ported learning environments

Blocks	Sample Question	Mean (1–5)	% High (4–5)	Key Interpretation
Motivational	"I am interested in applying AI in my research activities."	4.3	78%	Most respondents show high interest and motivation to integrate AI into research.
Cognitive	"I understand what heuristic technologies AI are."	3.8	54%	Knowledge about heuristic methods is moderate; theoretical understanding needs strengthening.
Procedural	"I can design a small research project using AI tools."	3.6	61%	Many students demonstrate developing practical research skills supported by AI.
Reflective–Evaluative	"I critically assess information obtained from AI tools."	3.9	49%	Students are moderately confident in evaluating AI-generated results; critical reflection should be enhanced.

These findings point to a clear need for structured pedagogical support in developing AI-assisted research practices. Integrating **AI-assisted heuristic methods** into educational programs can strengthen research competence formation in future teachers.

The analysis of the questionnaire titled *"Formation of Research Competence through AI and Heuristic Technologies"* provided valuable insights into how future foreign language teachers perceive and apply artificial intelligence (AI) and heuristic approaches in their research activities. The data were organized and analyzed according to the five main blocks of the instrument: motivational, cognitive, operational (procedural), reflective–evaluative components of research competence.

The results revealed that the motivational indicators showed the highest overall mean scores (M = 4.3). Most respondents agreed or strongly agreed that developing research competence is essential for their professional growth and that the use of AI tools increases their curiosity and engagement in learning. This demonstrates that students have a positive attitude toward integrating AI and heuristic technologies into educational and research activities, perceiving them as tools for self-development and professional success.

The cognitive block, reflecting students' awareness and understanding of AI and heuristic technologies, demonstrated moderate results (M = 3.8). While most students reported general awareness of AI applications in education, only some indicated confidence in distinguishing heuristic methods from traditional ones. This suggests that additional theoretical preparation and methodological training are needed to strengthen their conceptual understanding of AI-based and heuristic research strategies.

The procedural block showed slightly lower but still positive results (M = 3.6). Respondents indicated that they use AI tools, such as ChatGPT, Perplexity and Claude primarily for searching academic literature and formulating research ideas. However, fewer participants reported confidently designing research projects or analyzing data using AI-assisted methods. These findings indicate that while motivation is high, practical research skills supported by AI are still developing and require more guided practice and training.

In the reflective–evaluative component (M = 3.9), students demonstrated a growing ability to assess their research progress critically. Many participants reported being able to evaluate the reliability of AI-generated data and identify potential inaccuracies or biases. This block indicates that students are becoming more aware of ethical and methodological challenges related to AI use in research, which contributes to the formation of their reflective and analytical thinking.

Discussion. The results indicate particularly strong motivational effects, showing that students perceive AI and heuristic tools as valuable resources that enhance engagement, curiosity, and academic self-development. At the same time, cognitive and reflective components show moderate but positive development, suggesting a gradual improvement in students' understanding of AI- and heuristic-based research methods and their ability to critically evaluate generated outputs.

However, the procedural component remains the weakest area, as students still experience difficulties in applying AI and heuristic technologies to advanced research tasks such as data analysis, research design, and hypothesis formulation. This highlights the need for more structured methodological training and guided practice aimed at strengthening practical research skills. Systematic training and methodological guidance are therefore necessary to ensure that students use these tools critically and effectively, rather than relying on them passively.

These findings confirm that the integration of AI and heuristic technologies positively contributes to the formation of research competence among future foreign language teachers. The motivational component demonstrated the strongest results, indicating that students perceive AI as an inspiring and supportive tool for learning and inquiry. The cognitive and reflective components showed steady positive development, while the procedural component identified a clear area requiring further pedagogical attention.

Therefore, the effective integration of AI and heuristic technologies depends on the development of clear pedagogical frameworks, methodological guidance, and ethical awareness, ensuring that students can use these tools critically, responsibly, and independently. Integrating AI-assisted heuristic methods into teacher education programs aligns with the broader goals of digital transformation in education and contributes to forming teachers capable of conducting research autonomously in the modern educational landscape.

Conclusion. The findings revealed that students demonstrate an increasing awareness of the role of AI and heuristic technologies in research-based learning. While most respondents actively use AI to search for information, analyze data, and generate ideas, they also emphasize the importance of maintaining critical thinking and methodological rigor. Overall, the results indicate that the integration of AI and heuristic technologies enhances students' research competence by fostering creativity, analytical skills, and autonomy in inquiry-based activities within the digital learning environment.

This study explored the process of forming research competence among future foreign language teachers through the integration of artificial intelligence tools and heuristic technologies. The research confirmed that the development of research competence is a multidimensional and dynamic process that involves motivational, cognitive, operational, reflective, and value-based components.

The diagnostic results showed that students demonstrate strong motivation and interest in engaging with AI-supported research activities. They view AI tools such as ChatGPT, Perplexity, and Claude as effective assistants for generating ideas, improving academic writing, and enhancing analytical thinking. Building on the strong motivational foundation identified in this study, future pedagogical interventions should focus on translating students' enthusiasm into structured research practice.

At the same time, the operational-procedural component appeared to be less developed. While the operational-procedural dimension showed the most room for growth, this gap simultaneously identifies a clear pedagogical opportunity: embedding scaffolded AI practice tasks into core research methodology courses. These results emphasize the importance of targeted pedagogical interventions that guide students in the methodological use of AI, ensuring that technological support leads to genuine research development rather than mechanical task completion.

Furthermore, the cognitive block revealed a gap between students' general awareness of AI tools and their ability to critically apply them in the context of educational research. This indicates the need to strengthen courses on digital literacy, academic writing, and the ethical use of AI within teacher education programs.

Overall, the study confirmed that integrating AI and heuristic technologies into teacher training enhances students' readiness for research-based professional activity. It promotes creativity, reflection, analytical reasoning, and autonomy – the key attributes of a teacher-researcher in the modern educational landscape.

The practical implications of this study are significant for the design of teacher education curricula. The findings suggest that university programs should incorporate structured modules on AI-assisted research methods, heuristic problem-solving strategies, and critical evaluation of digitally generated content. Such modules should be embedded not as stand-alone electives but as integral components of core pedagogical disciplines, ensuring that future teachers develop both the technical proficiency and the reflective capacity to use AI responsibly and effectively.

Moreover, the study highlights the importance of creating supportive learning environments where students are encouraged to experiment with AI tools under methodological guidance, rather than independently and unsystematically. Educators play a crucial role in modeling ethical AI use, demonstrating how heuristic prompting, Socratic dialogue, and mind-mapping strategies can be combined with AI to deepen understanding and strengthen research independence.

Future research should focus on longitudinal studies that track the development of research competence over extended periods of AI-integrated instruction, as well as comparative analyses across different disciplinary contexts and educational institutions. Expanding the sample beyond a single faculty and academic year would allow for broader generalizations and more robust pedagogical recommendations.

In conclusion, the responsible and methodologically grounded integration of artificial intelligence and heuristic technologies represents a promising direction for higher education – one that equips future teachers not only with digital competencies but also with the intellectual independence, ethical awareness, and research culture necessary to thrive and contribute meaningfully in the rapidly evolving educational landscape of the twenty-first century.

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ПЕДАГОГИЧЕСКИЕ АСПЕКТЫ ФОРМИРОВАНИЯ ФИНАНСОВОЙ КУЛЬТУРЫ НАСЕЛЕНИЯ: ФИНАНСОВАЯ ГРАМОТНОСТЬ КАК ФАКТОР ЭКОНОМИЧЕСКОГО РАЗВИТИЯ

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В статье рассматривается финансовая грамотность как междисциплинарная категория, находящаяся на стыке экономики, финансов и педагогики, и анализируется её влияние на устойчивость экономического развития и финансовой безопасности государства. Особое внимание уделя-