The Effect of Generative AI Integration in a Peer-Learning Environment on Enhancing Law Students' Legal Research Skills and Active Knowledge Construction

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ABSTRACT

Generative Artificial Intelligence (AI) has been emerging as a more visible aspect of higher education as a conversational learning support system, which can generate responsive explanations and draft text. The application of Generative AI in legal education, however, is controversial since the ability of legal research requires the discipline of evaluating the sources, the integrity of the citation and evidence-based writing. A research paper will address the impact of ChatGPT on a systematic peer-learning context to develop the legal research skills and active knowledge building of law students. Using constructivist and social constructivist perspectives of learning, the research proposed a mixed-method approach that examined the study by collecting questionnaire data and semi-structured interviews in order to gain perceptions and learning experiences of students. The results suggest the perceived efficiency, effectiveness of peer discussion, predictable legal argument structuring and verification actions consistent with responsible legal research practice. Simultaneously, learners emphasised the threats of misguided outputs and excessive dependence and argued that AI literacy and clear guidelines of usage are required. In general, the research indicates that Generative AI can serve as a useful scaffold if it is integrated into the peer-learning frameworks that need to be critically reviewed and sources checked.

Keywords: Generative AI; ChatGPT; peer learning; legal education; legal research skills; active knowledge construction

INTRODUCTION

Generative AI has already found its way into institutions of higher learning and has been positioned as an educational technology that is capable of assisting inquiry, explanation and drafting due to a conversational interaction. Although there are perceived benefits (responsiveness and efficiency) that early studies report, the literature also warns of such issues as hallucinated outputs, integrity risks and overreliance, which leads to motivated calls of guided adoption and institutional governance (Jayavardhini, 2024; Bozkurt, 2023; Kronivets & Ilnytskyi, 2024; Murray, 2024).

These issues are exaggerated in the context of legal education since legal research is the practice of authority-sensitive interests, such as the identification of primary sources, doctrinal interpretation and evidence-based writing, with the support of correct citation. The navigation of legal sources, summarisation of doctrinal source materials and presentation of written arguments are generally areas of difficulty among students that are faced the most when asked to transfer the findings of legal research into publishable academic output (Annet, 2025; Oliveira & Martins, 2022; Hess, 2002; Susskind, 2021; Samuel, 2023).

Peer learning offers a pedagogical conceptualisation of dealing with these issues since it exists in organised interaction that supports collaborative meaning-making, discussion-based clarification and joint accountability

of learning outcomes. In the social constructivist viewpoint, learning is enhanced when students explain the reasoning, dispel assumptions and sharpen their knowledge through discussion. Peer learning may also optimise these advantages by means of embedding Generative AI, offering prompts and provisional arguments that may be interrogated and validated collectively by a group (Jiang & Chao, 2024; Nurhuda & Ni'mah, 2023; Johnson & Johnson, 2009; Kovari, 2025; Schneider, 2020).

Thus, the proposed study explores how the incorporation of ChatGPT into a well-organised peer-learning framework has an impact on the skill of law students to conduct legal research and actively construct knowledge, the perceived advantages of this approach, the practices associated with it and the limitations.

LITERATURE REVIEW

Generative AI as a Learning Scaffold

Generative AI systems have been addressed as learning support since they offer real-time interactive feedback that could help learners to clarify concepts, brainstorm and refine written output through iterative improvements. Nevertheless, academic literature is constantly cautious of the fact that generation products do not necessarily present themselves as reliable and, thus, should be viewed as tentative and not final. To this end, the educational usefulness of Generative AI relies on the pedagogical embedding, transparency, verification practices and ethical protection (Wei, 2023; Arowosegba, Oyelade, 2024; Popenici, Ani-Rus, 2023; Migliorini, Moreira, 2024).

Peer Learning, Constructivism and Knowledge Construction

The principles of peer learning are based on constructivist and social constructivist views, in which learning is considered a process of knowledge building through experience and polishing through the process of interaction. Group discussion encourages expression of ideas, mutual feedback and critical analysis, which facilitates a greater learning experience and intellectual processing. Peer-learning classrooms consequently provide reinforcement to active knowledge-building through the discussions between learners to elucidate interpretations, substantiate assertions and update knowledge (Keerthirathne, 2020; Bruffee, 1999; Topping, 2005).

Legal Research Skills and Disciplinary Standards

Legal research skills mean finding the appropriate authority, determining the credibility of the source, interpreting the legal texts and how to incorporate the evidence into sensible writing. This is one of the main competencies in academic and professional legal practice. In legal education literature, it is highlighted that genuine activities, systematic instructions and ongoing feedback can minimise the challenges faced by students without compromising the disciplinary regulations of authority and citation quality. In this regard, Generative AI could facilitate the research-writing process, but has to be controlled by verification with primary sources and dogmatic literature (Granle, 2022).

METHODOLOGY

The present study took a mixed-method approach to note down both perceptual patterns and the contextualised experience of the learners. A questionnaire assessing the perceived effects of AI-aided peer learning on legal research skills and knowledge construction was used to gather quantitative data. Semi-structured interviews were conducted to investigate the peer interaction patterns, AI use practices, verification behaviours and perceived limitations as qualitative data. Mixed-method designs facilitate triangulation because they allow convergence of quantitative patterns and qualitative elucidation and are suitable for assessing education interventions (Creswell & Creswell, 2018; Wiersma & Jurs, 2009; Cohen & Morrison, 2017).

FINDINGS

In order to simplify the work and prevent overlaps, the subsequent paragraphs put a special focus on the construct-level patterns that are used to interpret the results, summarising statistics in detail in Table 2 and Figure 1.

Participants and Instrument Quality

The questionnaire aspect involved thirty energy law students taking a module. The sample was primarily female (63.3%) and had an average age of 22-24 years (83.3%). The majority of the respondents were in Year 4 of study (93.3%). The experience of AI was self-reported and 56.7% of those who responded that they used AI often and 40.0% very often. The legal research experience, on the other hand, was mostly moderate (70.0%), with smaller fractions being high (26.7%) and low (3.3%). These traits of respondents constitute significant details to the perception of how AI-based peer learning was viewed in connection with the development of legal research.

Table 1. Respondent profile (n = 30)

Category	Group	Frequency	Percent (%)
Gender	Male	11	36.7
	Female	19	63.3
Age	19–21	1	3.3
	22–24	25	83.3
	25 and above	4	13.3
Year of Study	Year 3	2	6.7
	Year 4	28	93.3
AI Experience	Sometimes	1	3.3
	Often	17	56.7
	Very often	12	40.0
Legal Research Experience	Low	1	3.3
	Moderate	21	70.0
	High	8	26.7

Note. Percentages may not total 100 due to rounding.

Reliability of Questionnaire Scales

Internal consistency reliability was evaluated across the questionnaire constructs. Cronbach's alpha values were acceptable across all scales: Active Knowledge Construction (α = 0.747), Peer Interaction and Co-construction (α = 0.711), AI Support for Understanding and Research (α = 0.821), Effectiveness of AI-supported Peer-learning (α = 0.871) and Legal Research Skills (α = 0.756). These values support the reliability of the scales used to interpret students' perceptions of the learning activity.

Table 3. Internal consistency reliability of constructs

Construct	Items (k)	Cronbach's α
Active Knowledge Construction	4	0.747

Peer Interaction & Co-construction	4	0.711
AI Support for Understanding & Research	4	0.821
Effectiveness of AI-supported Peer-learning	4	0.871
Legal Research Skills	4	0.756

Note. Cronbach's α values above .70 indicate acceptable internal consistency for research instruments.

Reliability indices indicate acceptable internal consistency across constructs, supporting the interpretation of construct-level means (Table 2).

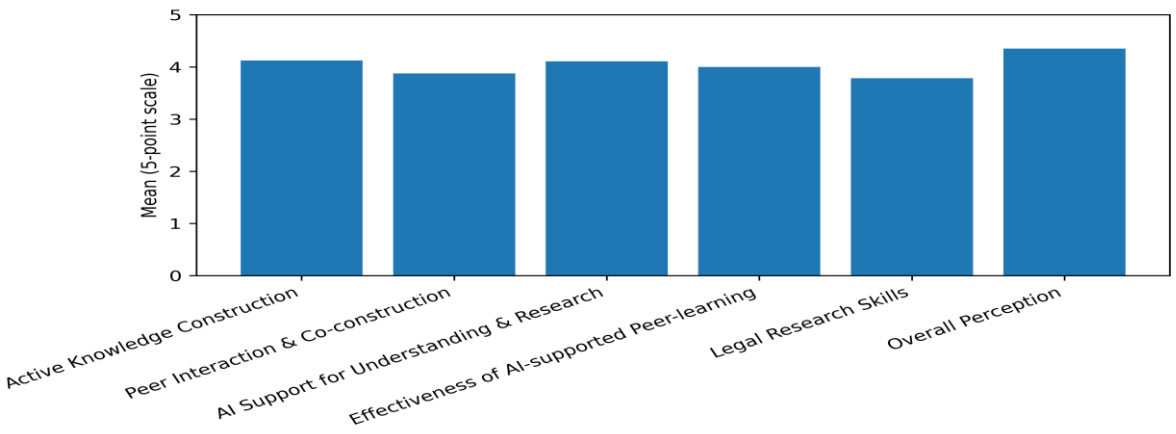
Table 2. Descriptive statistics for study constructs

Construct	Items (k)	Mean	SD	Interpretation
Active Knowledge Construction	4	4.125	0.536	High
Peer Interaction & Co-construction	4	3.875	0.779	Moderate
AI Support for Understanding & Research	4	4.108	0.729	High
Effectiveness of AI-supported Peer-learning	4	4.000	0.775	High
Legal Research Skills	4	3.783	0.675	Moderate
Overall Perception	2	4.350	0.631	High

Note. Higher mean values indicate stronger agreement on a 5-point Likert scale.

Table 2 shows the highest degree of agreement in the Overall Perception (M = 4.350, SD = 0.631) and Active Knowledge Construction (M = 4.125, SD = 0.536), indicating that AI-supported peer learning was perceived to be beneficial and cognitively meaningful. AI Support of Understanding and Research also had a high mean (M = 4.108, SD = 0.729), which shows perceived usefulness in explaining complex legal matters and directing research. In comparison, Legal Research Skills had the lowest construct mean (M = 3.783, SD = 0.675), which implies that AI assistance is the most significant in synthesis and confidence and less decisive in primary-source retrieval.

Figure 1. Mean scores across key constructs



Note. Bars represent construct mean scores (5-point Likert scale).

Active Knowledge Construction

Active Knowledge Construction Results showed that the overall level was high (construct mean = 4.125, SD = 0.536). At the item level, students stated that AI assisted them in learning about legal matters better (M = 4.167, SD = 0.648) and found it easier to relate facts of the case with the law (M = 4.200, SD = 0.664). Another agreement they reached was the fact that AI facilitated the creation of legal arguments that were more efficient (M = 4.067, SD = 0.740) and that AI allowed assessing legal principles in new dimensions (M = 4.067, SD = 0.785). All these findings indicate that students have perceived AI as a cognitive scaffold that facilitated meaning-making and conceptual integration when engaging in legal research activities.

Peer Interaction and Co-construction During Peer-learning

Another level of peer interaction and co-construction, which is moderately high, was also reported by students who used AI during group discussion. They concluded that AI enhanced the quality of peer discussions (M = 3.967, SD = 0.718) and motivated more active cooperation in the process of peer learning (M = 4.000, SD = 0.871). Reactions also suggest that AI-assisted groups in clarifying misconceptions on legal concepts (M = 3.800, SD = 0.761) and assisted in the confidence to express ideas during a discussion (M = 3.733, SD = 0.785). These findings indicate that AI is a joint conversational artefact, which may cause clarification and reasoning at a group level.

AI Support for Understanding and Research

Opinions regarding AI assistance with understanding and research were always favourable. Students were willing to say that AI offered explanations that assisted them in comprehending their legal problems of an intricate nature (M = 4.200, SD = 0.551) and presented practical examples that they followed in analysis (M = 4.267, SD = 0.640). They also concurred that AI facilitated the process of finding the relevant legal sources (M = 3.933, SD = 0.907) and minimised confusion in the process of conducting legal research (M = 4.033, SD = 0.809). These findings indicate that the perceived value of AI was not constrained to support in drafting, but also to conceptual clarification and early research orientation to the concept.

Effectiveness of AI-supported Peer-learning

Students did state positive impressions as to the effectiveness of AI-enhanced peer learning overall. They concurred that AI contributed positively to peer-learning activities (M = 3.967, SD = 0.850) and groups gained more insight into the legal analysis (M = 4.033, SD = 0.890). Students also said that AI helped to organise peer-learning sessions (M = 4.167, SD = 0.592) and helped to engage in active participation in peer-learning activities (M = 3.833, SD = 0.874). Collectively, these results point to the fact that students felt that AI enhanced the organisation and the productivity of the collaborative learning processes.

Legal Research Skills Outcomes

The results of Legal Research Skills were rated moderately high (construct mean = 3.783, SD = 0.675). The students said that AI enhanced their capacity to synthesise law principles (M = 4.100, SD = 0.481) and they became more confident about the execution of their legal research (M = 4.000, SD = 0.947). They also consented that AI assisted in coming up with better legal arguments (M = 3.967, SD = 0.718). Nonetheless, the least rated one involved the question of whether AI-assisted students could locate cases and statutes more effectively (M = 3.067, SD = 1.230). This trend indicates that students found AI to be especially helpful in synthesis and reasoning, with an understanding that they may still need to take the time to find authoritative primary sources by using legal databases and the well-known research instruments.

Overall Perception of the Learning Activity

The general impression of the learning activity was quite positive. Students concurred that AI positively influenced their legal research abilities (M = 4.267, SD = 0.583) and that they were in favour of introducing AI

into the legal education of the future (M = 4.433, SD = 0.679). These findings suggest that AI-facilitated peer learning is well accepted and more subtle item-wise findings are above.

Qualitative Interview Themes

The analysis of five semi-structured interviews was used to explain and elaborate on the trends in questionnaires. Five themes were found, which were interrelated. In the first place, there were reports of efficiency and clarity benefits during peer discussion and AI allowed explaining things fast and facilitating mutual understanding during group work. Secondly, learners indicated proactive evaluation and verification behaviour by focusing on the cross-checking of AI outputs with authoritative legal sources instead of viewing them as certain. Thirdly, the students emphasised a better arrangement of legal reasoning, which means that AI helped to organise the arguments in the course of writing and discussions. Fourthly, the students explained how the level of confidence builds as cautiously optimistic: they believed they were in a better position to put across ideas, yet still insisted on having to think independently and critically. In the end, students brought up concerns about inaccuracy and over-reliance and require more specific instructions and AI literacy education to help ensure responsible usage.

DISCUSSION

Interpreting Active Knowledge Construction in a Legal Research Context

The overall high ratings of Active Knowledge Construction indicate that students had found AI-supportive peer learning not as a convenience tool but as a more significant experience. The trend of means of items shows that AI was perceived to help in conceptual clarity, argument construction and integration of case facts with legal principles. Such behaviours are equivalent to the cognitive task of interpreting sources into the form of structured reasoning, which is the focus of doctrinal writing in a legal research context. This substantiates the opinion that Generative AI can be considered a scaffold to students in the transition between information gathering and interpretation and synthesis, especially when students are required to engage in a discussion with peers and polish their knowledge through debate.

Peer Interaction, Co-construction and Structured Dialogue

Results about peer interaction also reveal that AI can reinforce the collaborative aspect of learning when designed as a part of peer learning. Students showed that the quality of discussions and collaboration, as well as clarification of misunderstandings, improved. These are the results expected by social constructivists of the fact that learning may be mediated by interaction and that reasoning may be refined by discourse. The role of AI in this study seems to have been a common point of reference that allowed groups to move from uncertainty to a more definite shared meaning, therefore, co-constructing meaning instead of transmitting information in a one-way manner.

AI Support for Understanding and Research

The positive scores of students of AI assistance in the cognition and research imply that the device was perceived as especially helpful to explain complicated legal problems and create examples to follow the analysis. It is significant to note that the item concerned with recognising relevant legal sources was positive but comparatively less so and displayed greater variability. It means that AI can be beneficial in assisting students in organising their thoughts and providing guidance to them. Nevertheless, they still need the conventional legal research skills in order to find the sources of authority using databases and authorities. Put differently, AI can aid in the process of sense-making but cannot replace the disciplinary need to prove claims by way of verifiable authority.

Legal Research Skills: Where AI Helps and Where It Should Not Replace Method

The outcomes of the Legal Research Skills give a subtle image. The support of AI in synthesising legal principles and the improvement of confidence in carrying out research were most supported by the students. These results are aligned with the qualitative themes of better organisation of the legal reasoning and gaining confidence. Nevertheless, the least powerful one was efficiency when locating cases and statutes. Such is a significant

boundary of legal education: primary sources are kept in specialised databases and official repositories and the process of finding the authority is a matter of search strategies, jurisdictional awareness and methodological rigour. Based on this, the findings show that AI can have the most vital educational role in the conceptual integration, synthesis and drafting stages. Simultaneously, the process of source retrieval is to be instructed using the legal methods of research that have already been developed.

Verification Behaviours and Academic Integrity

Active evaluation and verification as the theme of the interview are of great importance in terms of the quality of publications, as well as in terms of legal education. Students attributed cross-checking AI responses with statutes, cases and reliable sources, which suggests that they interpreted the AI responses as tentative. This habit is in line with the legal approach, which places more emphasis on power and requires reasoned evidence. Meanwhile, the motif of danger, particularly inaccurate production and overdependence, indicates a necessity to provide clear instructions. Inclusion should then encompass AI literacy training aimed at becoming aware of limitations, getting used to verification routines and keeping transparent citation practices. These are some of the measures designed to ensure that AI-enhanced learning improves critical thinking instead of ousting it.

Implications for Learning Design in Legal Education

Combined, the results indicate that the educational worth of Generative AI is based on systematic application. The positive attitude to effectiveness and organisation suggests that AI-based peer learning can be especially appropriate when it comes to tasks where discussion, justification and the ability to improve something over time are needed. As applied to legal research pedagogy, these aspects lead to the pragmatic design considerations that students should record the verification processes, there must be peer review processes and reasoning and authority application and use should be evaluated instead of the superficial output of the student. This design will be able to utilise AI as a framework and reinforce the disciplinary regimes that characterise rigorous legal research.

This research is prone to a number of limitations. To begin with, the sample was relatively small (n = 30) and was selected in one of the Energy Law courses at one institution, which restricts the Extrapolation of the results to larger legal education settings. Secondly, the research was based mainly on the self-reported views of learning outcomes, which can be subject to response bias and subjective confidence of the students, instead of the objective performance. Third, the intervention was done in the context of a particular peer-learning design and in a short period, which might not reflect the longer-term skill acquisition or transferability. When interpreting the findings, these limitations have to be taken into consideration.

CONCLUSION

This paper discussed the impact of introducing ChatGPT to peer-learning contexts to support law students in developing legal research capabilities and actively building their knowledge, in which they felt the advantages, such as enhanced productivity, comprehensible peer interactions and boosted confidence in how they organised a legal argument. Whereby, Students exhibited verification behaviours where they can cross-reference the AI outputs with authoritative bodies of law. Nevertheless, the issues about inaccuracies and overreliance were still relevant. The results, therefore, suggest that Generative AI can be educationally important when applied as a support structure within structured peer learning, with AI literacy training and explicit ethical principles.

Future research can build on this work by adding objective instances of using legal research skills, including the evaluation of the accuracy of citation using a rubric, or the quality of case selection or doctrinal reasoning prior to and following AI-assisted peer-learning interventions. They can also be used to compare or quasi-experimental designs to investigate the differences between AI-assisted and non-AI-assisted peer-learning groupings on various legal topics and legal institutions.

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This manuscript was prepared with the support of artificial intelligence tools, which were used solely to assist with drafting, editing and language refinement. All intellectual content, scholarly analysis, interpretation and conclusions presented in this work are the original work of the authors. The use of AI tools was transparent, supervised and did not contribute to the generation of original research data or substantive intellectual content.

REFERENCES

1. Annet, K. A. (2025). Legal education and the digital divide: Communication challenges. Eurasian Experiment Journal of Humanities and Social Sciences (EEJHSS), 7(2), 116–121
2. Arowosegbe, A., Alqahtani, J. S., & Oyelade, T. (2024). Students' perception of generative AI use for academic purpose in UK higher education. https://doi.org/10.20944/preprints202405.1158.v1
3. Bozkurt, A. (2023). Unleashing the potential of generative AI, conversational agents and chatbots in educational praxis: A systematic review and bibliometric analysis of GenAI in education. Open Praxis, 15(4), 261–270. https://doi.org/10.55982/openpraxis.15.4.609
4. Bruffee, K. A. (1999). Collaborative learning: Higher education, interdependence and the authority of knowledge (2nd ed.). Johns Hopkins University Press
5. Cohen, L., Manion, L., & Morrison, K. (2017). Research methods in education (8th ed.). Routledge. https://doi.org/10.4324/9781315456539
6. Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative and mixed methods approaches (5th ed.). SAGE Publications
7. Granle, K. (2022). Beyond the Socratic method: Exploring alternative theories in legal education. Scholars International Journal of Law, Crime and Justice, 5(1), 22–29. https://doi.org/10.36348/sijlcj.2022.v05i01.004
8. Hess, G. F. (2002). Heads and hearts: The teaching and learning environment in law school. Journal of Legal Education, 52(1–2), 75–111. https://eric.ed.gov/?id=EJ657587
9. Jayavardhini, P. (2024). AI study partner: Development of an LLM and Gen AI-enhanced study assistant tool. International Journal of Scientific Research in Engineering and Management, 8(3), 1–5. https://doi.org/10.55041/ijsrem29626
10. Jiang, S., McClure, J., Tatar, C., Bickel, F., Rosé, C. P., & Chao, J. (2024). Towards inclusivity in AI: A comparative study of cognitive engagement between marginalised female students and peers. British Journal of Educational Technology, 55(6), 2557–2573. https://doi.org/10.1111/bjet.13467
11. Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. Educational Researcher, 38(5), 365–379. https://doi.org/10.3102/0013189X09339057
12. Keerthirathne, W. K. (2020). Peer learning: An overview. International Journal of Scientific Engineering and Science, 4(11), 1–6.
13. Kovari, A. (2025). A systematic review of AI-powered collaborative learning in higher education: Trends and outcomes from the last decade. Social Sciences & Humanities Open, 11, 101335. https://doi.org/10.1016/j.ssaho.2025.101335
14. Kronivets, T., Yakovenko, O., Tymoshenko, Y., & Ilnytskyi, M. (2024). Dimensions of legal and moral use of artificial intelligence in education. Rev. Artif. Intell. Educ, 5, e025. https://doi.org/10.37497/rev.artif.intell.educ.v5i00.25
15. Migliorini, S., & Moreira, J. I. (2024). The case for nurturing AI literacy in law schools. Asian Journal of Legal Education, 12(1), 7–24. https://doi.org/10.1177/23220058241265613
16. Murray, M. D. (2024). Artificial intelligence for learning the law: Generative AI for academic support in law schools and universities. ResearchGate. https://www.researchgate.net/publication/383786349

17. Nurhuda, A., Khoiron, M., Azami, Y., & Ni'mah, S. (2023). Constructivism learning theory in education: Characteristics, steps and learning models. Research in Education and Rehabilitation, 6(2), 234–242. https://doi.org/10.51558/2744-1555.2023.6.2.234
18. Oliveira, H., Sanches, T., & Martins, J. (2022). Problem-based learning in a flipped classroom: A case study for active learning in legal education in international law. The Law Teacher, 56(1), 1–17. https://doi.org/10.1080/03069400.2022.2040934
19. Popenici, Ş., Catalano, H., Mestic, G., & Ani-Rus, A. (2023). A systematic review of the implications of artificial intelligence in shaping the future of higher education. Educatia 21, (26), 92–107. https://doi.org/10.24193/ed21.2023.26.11
20. Samuel, G. (2023). Is legal knowledge regressing (thanks to AI)? Amicus Curiae, 4(3), 719–750. https://doi.org/10.14296/ac.v4i3.5628
21. Schneider, T. (2020). A social constructivist grounded theory of school principal legal learning. Journal of Research on Leadership Education, 16(3), 226–242. https://doi.org/10.1177/1942775120902191
22. Susskind, R. (2021). Tomorrow's lawyers: An introduction to your future (3rd ed.). Oxford University Press
23. Topping, K. J. (2005). Trends in peer learning. Educational Psychology, 25(6), 631–645. https://doi.org/10.1080/01443410500345172
24. Wei, L. (2023). Artificial intelligence in language instruction impacts English learning achievement, L2 motivation and self-regulated learning. Frontiers in Psychology, 14. https://doi.org/10.3389/fpsyg.2023.1261955
25. Wiersma, W., & Jurs, S. G. (2009). Research methods in education: An introduction (9th ed.). Pearson Education.