

APPLYING GENERATIVE ARTIFICIAL INTELLIGENCE IN THE STUDY AND RESEARCH OF LAW BY STUDENTS: OPPORTUNITIES AND CHALLENGES

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ABSTRACT

Background: Generative Artificial Intelligence (AI) is increasingly influencing legal education and changing how law students access information, conduct research, and develop legal reasoning. However, its use also raises concerns regarding reliability, academic responsibility, critical thinking, and independent legal reasoning.

Objective: This study aims to examine the applications, opportunities, and challenges of generative AI in the study and research of law students and to identify approaches for its responsible integration into legal education.

Methodology: The study employs a narrative literature review of relevant academic studies, professional reports, and policy documents, with a focus on evidence published from 2023 to 2026. The analysis is guided by Connectivism, Constructivist learning perspectives, the TPACK framework, and AI literacy.

Results: The findings indicate that generative AI can support legal information retrieval, research topic development, document summarization, legal analysis, and interactive learning. Nevertheless, risks related to inaccurate or hallucinated information, over-reliance on AI, academic integrity, and the development of independent legal reasoning remain significant. The study therefore proposes responsible and strategic AI integration in which students, educators, educational institutions, and technology providers share appropriate responsibilities.

KEYWORDS: Generative AI, Legal Education, Law Students, Legal Research, Opportunities, Challenges.

1. INTRODUCTION

The rapid development of generative artificial intelligence (GenAI) has introduced a new technological dimension into higher education and the legal profession. Large language models can generate, summarize, transform, and explain text in response to user instructions, while multimodal systems can process combinations of text, images, audio, and other forms of information. The development of systems such as GPT-4o illustrates the increasing capacity of contemporary AI models to interact with users through multiple modalities and to perform a wide range of language-based tasks [6].

The implications of these developments are particularly significant for legal education because legal learning requires students to work extensively with legislation, case law, legal scholarship, factual scenarios, and argumentative writing. GenAI can potentially assist students in locating and organizing information, explaining unfamiliar concepts, comparing legal materials, developing preliminary research questions, and testing alternative arguments. Research on AI in legal education similarly identifies opportunities relating to personalized learning, legal research, case analysis, and the development of new forms of AI-assisted instruction [3].

However, the growing availability of GenAI should not be interpreted as evidence that these systems automatically improve legal learning. One important distinction concerns the population from which evidence is derived. For example, the 2025 Clio Legal Trends Report contains evidence concerning legal professionals rather than law students, including a neurological study involving 63 legal professionals performing everyday legal tasks [2]. Such evidence may provide useful contextual information about the potential effects of legal technology, but it cannot by itself establish improved learning outcomes among law students.

Evidence from higher education also indicates rapid adoption. The Higher Education Policy Institute's Student Generative AI Survey 2025, based on 1,041 full-time undergraduate students in the United Kingdom, reported that 92% had used AI in at least one way, compared with 66% in the previous survey, while 88% reported using GenAI for assessments [9]. These figures demonstrate the growing presence of AI in higher education, but the survey population was not limited to law students. Consequently, the findings should be treated as evidence of a broader higher-education trend rather than direct evidence concerning legal education.

At the same time, reliability remains a major concern. Magesh et al. examined leading AI legal research tools and demonstrated that hallucination remains a significant issue in AI-assisted legal research. Their study is particularly relevant

to legal education because legal research requires accurate identification and verification of authorities, rather than merely producing text that appears legally plausible [4].

The use of GenAI also raises broader questions about academic responsibility, privacy, equity, and the changing relationship between students and knowledge. UNESCO emphasizes that the integration of AI into education requires attention not only to technological opportunities but also to risks, inclusion, equity, and the preparation of learners to live and work with AI [8]. In legal education, these issues are especially important because students are being prepared for a profession in which the accuracy of legal sources, quality of reasoning, professional responsibility, and ethical judgment are fundamental.

Accordingly, the central issue is not whether GenAI should simply be permitted or prohibited. Rather, the relevant question is how law students can use GenAI while preserving the intellectual processes that legal education is intended to develop. This article therefore examines three related dimensions: first, the principal applications of GenAI in law students' learning and research; second, the opportunities and challenges associated with those applications; and third, the conditions under which GenAI can be integrated without displacing independent legal reasoning.

2. METHODOLOGY

2.1. RESEARCH DESIGN

This study adopts a narrative literature review approach to examine the applications, opportunities, and challenges of generative artificial intelligence (GenAI) in the study and research of law by students. A narrative review is appropriate for the present study because the emerging literature on GenAI in legal education encompasses different types of evidence, including peer-reviewed academic studies, institutional reports, professional reports, policy and guidance documents, and research on the use and reliability of AI-supported legal technologies.

Rather than treating these sources as a homogeneous body of empirical evidence, the study synthesizes them qualitatively according to their relevance to the research objectives. The analysis focuses on four interconnected dimensions: (1) the applications of GenAI in legal learning and research; (2) the educational and professional opportunities associated with its use; (3) the risks and limitations arising from GenAI use; and (4) the conditions required for responsible integration into legal education.

The review covers literature and relevant institutional materials published primarily between 2023 and 2026, reflecting the rapid development and adoption of generative AI technologies during this period. Earlier theoretical works are retained where they provide the conceptual foundations for the analytical framework, particularly the literature on Connectivism, Constructivism, and Technological Pedagogical Content Knowledge (TPACK).

2.2. LITERATURE IDENTIFICATION AND SEARCH STRATEGY

The literature was identified through targeted searches for materials addressing generative AI, legal education, law students, legal research, AI-assisted legal practice, learning effectiveness, academic integrity, critical thinking, and the reliability of AI-generated legal information. The search process was guided by combinations of concepts relating to “generative AI”; “artificial intelligence”; “ChatGPT”; “legal education”; “law students”; “legal research”; “AI literacy”; “legal reasoning” and “academic integrity”.

Particular attention was given to literature published from 2023 onward because this period corresponds to the rapid diffusion of large language model-based generative AI tools in education and legal practice. Relevant earlier publications were also considered when they established theoretical concepts used in the study, including Connectivism, Constructivism, and TPACK.

The review also considered materials produced by recognized professional, educational, and research institutions where these materials provided relevant empirical or policy evidence concerning the use of AI in legal education or legal work. These sources include reports and guidance relating to legal technology, higher education, AI literacy, and the reliability of AI-supported legal research tools.

2.3. INCLUSION AND EXCLUSION CRITERIA

Sources were included when they satisfied one or more of the following criteria:

1. They directly examined or substantially discussed generative AI in higher education, legal education, legal research, or legal practice with implications for law students.
2. They provided empirical, analytical, policy, or professional evidence relevant to the opportunities or risks of GenAI use.
3. They addressed issues such as AI-assisted legal research, legal reasoning, document analysis, drafting, personalized learning, academic integrity, hallucinations, bias, privacy, or critical thinking.
4. They contributed a relevant theoretical or conceptual foundation for analyzing technology-supported learning, particularly Connectivism, Constructivism, TPACK, or AI literacy.
5. They were sufficiently identifiable and attributable to an academic, professional, governmental, educational, or recognized institutional source.

Sources were excluded when they were not sufficiently relevant to the research questions, lacked an identifiable source or author, provided only general commentary without substantive relevance to legal education or learning, or duplicated evidence already represented by another source. Where institutional or professional reports were used, their findings were treated as contextual or supplementary evidence rather than automatically equated with peer-reviewed empirical research.

2.4. LITERATURE SELECTION AND ANALYTICAL APPROACH

The selected literature was organized thematically rather than statistically. First, sources were examined for their relevance to the study's research objectives. Second, relevant evidence was grouped into the principal themes of GenAI applications, educational opportunities, risks and challenges, and institutional and pedagogical responses. Third, the identified findings were interpreted through the theoretical perspectives introduced in Section 1.2.

Connectivism was used to examine how GenAI changes students' access to, connection with, and evaluation of distributed legal knowledge. Constructivism was used to consider whether AI-supported interaction facilitates active knowledge construction or, conversely, encourages passive reliance on generated answers. TPACK was used to analyze the interaction between technological capabilities, pedagogical practices, and legal content knowledge. AI literacy was considered as a complementary framework for assessing students' ability to understand, use, evaluate, and ethically manage AI-generated information.

The analysis also distinguishes, where possible, between evidence concerning law students and evidence concerning legal professionals or the broader higher-education population. Professional reports and studies of practicing lawyers are used primarily to provide contextual evidence regarding emerging technological practices rather than as direct evidence of student learning outcomes.

Because the GenAI field is evolving rapidly, the findings are interpreted with caution. Reported benefits and risks are not assumed to be universal across educational institutions, jurisdictions, legal systems, or AI platforms. Differences in the underlying source type, population, geographical context, research design, and technological environment are considered when interpreting the evidence.

3. THEORETICAL OVERVIEW

3.1. NATURE AND CHARACTERISTICS OF GENERATIVE ARTIFICIAL INTELLIGENCE IN THE CONTEXT OF LEGAL EDUCATION

Generative artificial intelligence (GenAI) represents a significant development in artificial intelligence technology. Unlike conventional AI systems that are primarily designed for tasks such as classification, prediction, or optimization, GenAI is designed to generate new content in response to user instructions. In the context of language-based systems, large language models (LLMs) use large-scale training data and neural-network architectures to generate and transform text. Contemporary multimodal systems, such as GPT-4o, can process different types of inputs and generate corresponding outputs [6].

LLMs constitute an important technological foundation for many current GenAI applications. In addition to general-purpose systems, specialized AI tools have been developed for legal research and professional legal work. These systems can assist users with tasks such as searching for information, summarizing legal materials, organizing documents, and generating preliminary textual responses. However, the ability to generate legally plausible language does not mean that an AI system produces authoritative or legally accurate information. This distinction is particularly important in legal education, where students must learn to identify and verify authoritative legal sources.

In the context of legal education, GenAI changes the way students can interact with learning materials. Instead of relying exclusively on static documents, students can use conversational AI systems to ask questions, request explanations, explore alternative interpretations, and receive immediate responses. Such interaction creates opportunities for more flexible and individualized learning activities. Dolidze similarly identifies the growing relevance of AI to legal education and legal research, while emphasizing the need to consider the implications and limitations of these technologies in educational contexts [3].

At the same time, the generative nature of these systems creates important limitations. GenAI can produce inaccurate, incomplete, or misleading information, including fabricated legal authorities or citations. Research by Magesh et al. demonstrates that reliability problems remain present even in specialized AI-assisted legal research tools, highlighting the need for users to verify AI-generated legal information against authoritative sources [4].

Accordingly, GenAI should not be conceptualized as an independent source of legal authority. In legal education, its appropriate role is better understood as a technological resource that can support information access, explanation, organization, drafting, and interaction, while students remain responsible for evaluating the accuracy and relevance of the generated content. Understanding both the capabilities and limitations of GenAI is therefore necessary for assessing its educational value.

3.2. THEORETICAL FRAMEWORKS APPLIED IN RESEARCH

This study uses a multidimensional theoretical framework to examine the application of GenAI in the learning and research of law students. The framework combines Connectivism, a constructivist learning perspective, and the Technological Pedagogical Content Knowledge (TPACK) framework. These perspectives are complementary: Connectivism explains changes in the information environment; constructivism emphasizes the learner's active role in constructing knowledge; and TPACK provides a framework for examining the relationship between technology, pedagogy, and legal content.

3.2.1. CONNECTIVISM

Connectivism, developed by George Siemens, conceptualizes learning in the digital age as a process involving the formation and maintenance of connections among information sources, individuals, technologies, and networks [7]. From this perspective, knowledge is not limited to what an individual currently possesses but is also distributed across external networks and information environments.

This perspective is particularly relevant to legal education because legal knowledge is distributed across legislation, judicial decisions, administrative materials, academic literature, databases, and other sources. GenAI can function as an additional technological node through which students interact with this distributed information environment. It can help students identify possible relationships among legal concepts, formulate research questions, and organize preliminary information.

However, Connectivism also makes the ability to evaluate connections important. Access to information does not by itself establish the reliability or legal validity of that information. Therefore, when GenAI is used in legal research, students must evaluate whether the information generated by the system corresponds to authoritative sources, whether it remains legally current, and whether it is appropriate to the relevant jurisdiction.

Accordingly, this study uses Connectivism not simply to argue that GenAI expands access to information, but to examine how students navigate, evaluate, and connect information in an increasingly AI-mediated legal research environment.

3.2.2. CONSTRUCTIVIST LEARNING PERSPECTIVE

A constructivist learning perspective emphasizes that learners actively construct knowledge through interaction, experience, problem-solving, and reflection. Rather than treating students as passive recipients of information, constructivism places emphasis on the learner's active engagement with learning tasks.

This perspective is particularly relevant to GenAI-supported legal education. A student may use an AI system to generate alternative arguments, identify counterarguments, explain a difficult legal concept, or simulate a legal dispute. Nevertheless, the educational value of these interactions depends on what the student does with the generated response.

If students simply accept an AI-generated answer, the technology may reduce the need for active cognitive engagement. By contrast, if students examine the response, compare it with legislation and case law, identify inaccuracies, and formulate their own conclusions, the interaction can become part of an active learning process.

Therefore, GenAI should be treated as a potential interactive learning resource rather than as a substitute for the learner's own reasoning. In this study, the constructivist perspective is used to examine whether and how GenAI-supported activities encourage students to question, evaluate, reconstruct, and apply legal knowledge.

3.2.3. TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE (TPACK)

The TPACK framework developed by Mishra and Koehler emphasizes the interaction among technological knowledge, pedagogical knowledge, and content knowledge in effective technology integration [5]. The framework suggests that the successful use of technology in education cannot be achieved merely by possessing technical skills. Technology must be appropriately connected to the subject matter and to the pedagogical objectives of a particular learning activity.

In legal education, the content dimension is represented by legal knowledge, including knowledge of legislation, case law, legal concepts, legal reasoning, and the relevant jurisdiction. Technological knowledge concerns students' and instructors' understanding of how GenAI systems operate and how they can be used. Pedagogical knowledge concerns the design of learning activities through which GenAI contributes to the intended educational objectives.

For example, using GenAI to summarize a legal document requires technological knowledge, but determining whether the summary accurately represents the applicable legal rule requires legal content knowledge. Similarly, asking students to evaluate an AI-generated legal argument requires pedagogical design that encourages source verification, critical analysis, and independent reasoning.

TPACK therefore provides a useful framework for understanding why access to GenAI alone does not guarantee effective legal learning. The educational value of the technology depends on whether its use is appropriately aligned with the legal content and the learning objective.

In this study, TPACK is used to analyze the conditions under which GenAI can be integrated into legal education without displacing the development of core legal competencies. It also provides a basis for the recommendations concerning students, faculty, and educational institutions presented later in the article [5].

3.2.4. AI LITERACY

AI literacy provides a complementary competency framework for the responsible use of GenAI. UNESCO's guidance on AI and education emphasizes that the integration of AI into educational environments requires attention to both opportunities and risks, including issues of inclusion, equity, human agency, and responsible use [8].

For law students, AI literacy should extend beyond the ability to operate an AI tool. It should include an understanding of the basic characteristics and limitations of GenAI, the ability to formulate appropriate instructions, the ability to critically evaluate AI-generated outputs, and awareness of academic, ethical, and privacy-related responsibilities.

AI literacy is therefore closely connected to the three theoretical perspectives used in this study. Connectivism emphasizes the ability to navigate and evaluate distributed information; constructivism emphasizes active engagement with AI-generated content; and TPACK emphasizes the appropriate integration of technology with legal content and pedagogical objectives.

3.3. Research Argument

Research on the use of generative artificial intelligence in legal education and research has expanded rapidly in recent years. Existing literature indicates that generative AI can support legal information retrieval, summarization, drafting, and other research-related activities, but its outputs cannot be assumed to be accurate merely because they are fluent or well structured [3], [4].

Magesh et al. [4] provide empirical evidence of this reliability problem in AI-assisted legal research. Their study examined several leading legal AI research tools and GPT-4, finding substantial differences in the accuracy, incompleteness, and hallucination rates of their outputs. For example, Lexis+ AI produced 17% hallucinated responses, while Westlaw AI-Assisted Research produced 33%. GPT-4 showed an even higher hallucination rate of 43% in the study [4].

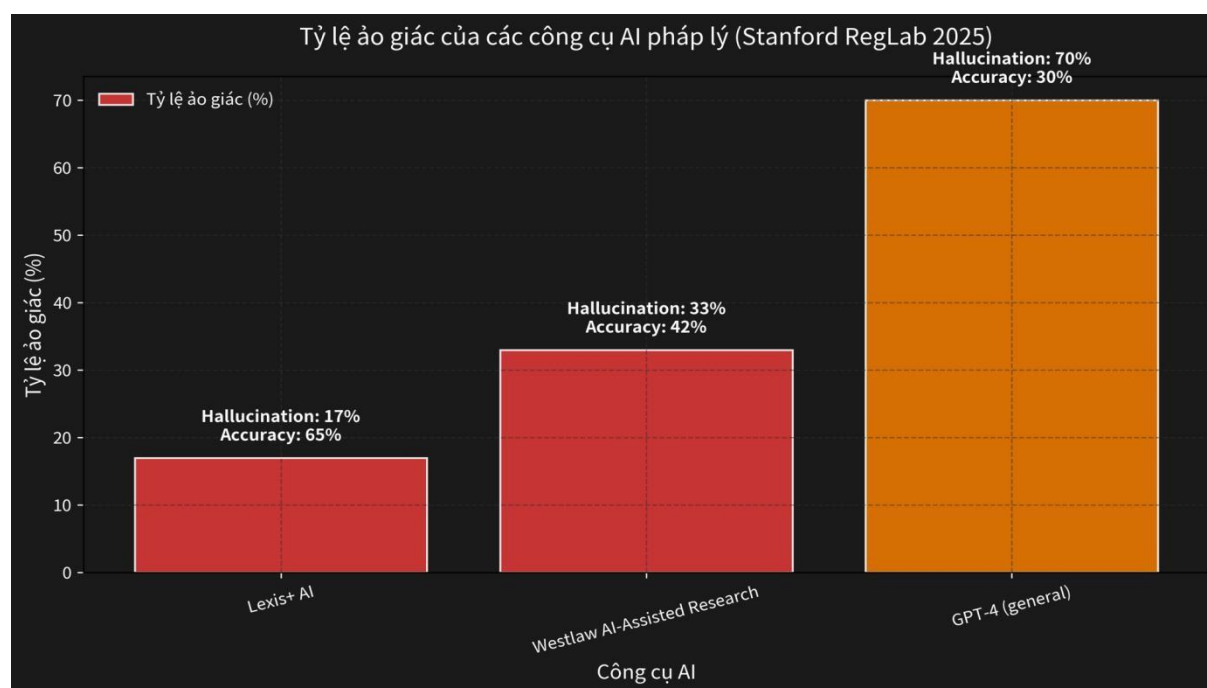


Figure 1: Reliability and Hallucination Rates of Selected AI-Assisted Legal Research Tools

Source: Adapted from Magesh et al. (2025) [4].

These findings are particularly relevant to legal education because law students may use generative AI not only to obtain information but also to understand legal rules, identify relevant authorities, formulate arguments, and prepare academic work. The reliability problem therefore requires students to maintain an active role in verifying AI-generated information against authoritative legal sources rather than treating AI outputs as independent sources of legal authority [4].

From a theoretical perspective, this issue can be understood through the four analytical perspectives adopted in this study. Connectivism emphasizes the learner's ability to identify, evaluate, and connect information within digital networks. Constructivist learning perspectives emphasize active knowledge construction through interaction and reflection. TPACK highlights the need to integrate technological knowledge with pedagogical and legal content knowledge, while AI literacy emphasizes the ability to understand, critically evaluate, and use AI systems responsibly [5], [7], [8].

Accordingly, this study argues that the application of generative AI in the study and research of law should not be understood simply as a technological substitution for traditional learning activities. Rather, its educational value depends on how students use AI as a supporting technological resource while retaining responsibility for legal verification, critical reasoning, and independent knowledge construction.

4. APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN THE STUDY AND RESEARCH OF LAW-BY-LAW STUDENTS

4.1. EMPIRICAL EVIDENCE AND IMPACT ON LEARNING EFFECTIVENESS

Empirical evidence indicates that generative AI can affect the way users perform information-intensive tasks in the legal field. The 2025 Legal Trends Report by Clio, including a neurological study conducted in collaboration with Neuro-Insight, examined 63 legal professionals performing timed legal-work tasks. The study reported that the use of AI was associated with a reduction in aggregate cognitive load of up to 25% in the tasks examined [2]. Because the participants were legal professionals rather than law students, this evidence should be understood as evidence of the potential of AI in legal work rather than direct evidence of improved learning outcomes among law students.

For law students, the potential educational relevance of these findings lies in the possibility of reducing the cognitive burden associated with repetitive information-processing activities. Students may use generative AI to obtain preliminary explanations, summarize lengthy materials, organize legal issues, or generate alternative formulations of a research question. These functions may allow students to devote more attention to interpretation, evaluation, and legal reasoning. Nevertheless, whether such effects actually improve learning outcomes depends on how students interact with the technology and whether they remain actively involved in the learning process.

The potential applications and the corresponding evidence should therefore be distinguished as follows:

Table 1: Potential Applications and Evidence Relevant to Learning Effectiveness

Learning activit	Potential application of generative AI	Evidence and scope
Processing	Summarizing lengthy	Relevant to learning support;
legal information	materials, explaining concepts, and organizing information	direct quantitative evidence for law students remains limited
Legal issue identification	Generating preliminary questions and identifying issues requiring further research	Potential application; requires independent verification by students
Legal analysis	Comparing arguments, identifying possible counterarguments, and testing alternative interpretations	Supports iterative analysis but does not establish independent legal accuracy
Legal writing	Assisting with outlines and preliminary formulations	Can reduce routine drafting effort, but students remain responsible for substantive legal reasoning
Repetitive legal tasks	Assisting with information-intensive and repetitive activities	Clio/Neuro-Insight reported up to 25% lower aggregate cognitive load among 63 legal professionals in the tasks studied [2]
Personalized learning	Providing explanations and feedback adapted to individual prompts	Educational potential; quantitative evidence specific to law students remains limited

Source: Author's synthesis based primarily on Clio [2] and the literature reviewed in this study.

The evidence in Table 2.1 demonstrates an important distinction between the potential uses of generative AI and empirically demonstrated learning effects. Although AI can perform tasks that may support learning, the available evidence does not justify concluding that its use automatically produces better academic performance among law students. From a constructivist perspective, the educational value of AI depends on whether students actively evaluate and reconstruct the information obtained through interaction with the system. Similarly, from a TPACK perspective, effective use requires the integration of technological knowledge with pedagogical and legal content knowledge [5].

4.2. ADVANCED APPLICATIONS AND QUANTITATIVE EVIDENCE OF EFFECTIVENESS

Beyond basic information processing, generative AI can be used in more advanced legal-learning and research activities. For law students, these applications may include complex legal research, legal argument analysis and construction, preliminary legal drafting, simulation of professional interactions, and critical examination of alternative legal positions.

First, in complex legal research, students can use generative AI to formulate search terms, organize preliminary information, compare legal concepts, and identify issues for further investigation. AI may be particularly useful during the exploratory stage of research, when students are attempting to understand the structure of an unfamiliar legal problem. However, AI-generated references and legal propositions must be checked against authoritative primary and secondary sources.

Second, generative AI can support legal argument analysis and construction. Students can ask an AI system to identify possible arguments and counterarguments, test the internal consistency of a proposed position, or simulate objections that another party might raise. Such interaction can provide a form of iterative dialogue that encourages students to reconsider their initial reasoning. This application is consistent with Connectivism, because students interact with and evaluate information distributed across digital networks, while also reflecting the constructivist emphasis on active knowledge construction [7].

Third, generative AI can assist with preliminary legal drafting. Students may use AI to develop an initial structure for a legal memorandum, research paper, case analysis, or presentation. The technology can also assist with language refinement and structural organization. However, preliminary drafting should remain distinct from final legal authorship. The student must determine the applicable law, select and verify authorities, develop the legal reasoning, and assume responsibility for the final text.

Fourth, AI can be used to simulate professional legal interactions. Students may instruct an AI system to act as a hypothetical client, opposing counsel, judge, or negotiation counterpart. Such simulations can provide opportunities to practice issue identification, questioning, argumentation, and response under changing factual circumstances. These applications can complement, but not replace, supervised clinical education, moot courts, and other forms of practical legal training.

The quantitative evidence currently available should nevertheless be interpreted cautiously because different studies examine different populations and tasks. A consolidated presentation is therefore provided below:

Table 2: Selected Quantitative Evidence on Generative AI Use Relevant to Legal Learning and Research

Indicator	Reported finding	Population / context	Interpretation for law students
Reduction in aggregate cognitive load	Up to 25%	63 legal professionals performing timed legal-work tasks; Clio/Neuro-Insight [2]	Indicates potential efficiency in information-intensive legal tasks, but is not direct evidence of improved student learning
Use of generative AI for assessments	88%	1,041 full-time undergraduate students in the UK; HEPI 2025 [9]	Demonstrates widespread use in higher education, but the survey is not specific to law students
Use of AI to explain academic concepts	58%	UK undergraduate students; HEPI 2025 [9]	Illustrates a common educational use of AI, without establishing a law-specific effect
Use of AI to summarize articles	48%	UK undergraduate students; HEPI 2025 [9]	Relevant to academic information processing, but not specific to legal research
Use of AI to suggest research ideas	41%	UK undergraduate students; HEPI 2025 [9]	Illustrates AI's role in early-stage research support

Source: Compiled by the author based on Clio [2] and Freeman/HEPI [9].

The evidence in Table 2.2 should not be interpreted as demonstrating a single, uniform level of effectiveness. The Clio study concerns legal professionals and task-related cognitive load, whereas the HEPI survey concerns undergraduate students in the United Kingdom and reports patterns of AI use rather than measured learning gains [2], [9]. These differences in population, research design, and outcome measures are important when considering the applicability of the findings to law students.

Overall, generative AI can provide meaningful support across different stages of legal learning and research, particularly in information processing, exploratory research, argument development, preliminary drafting, and simulated interaction. However, its effectiveness is conditional rather than automatic. Students must retain responsibility for verifying legal sources, evaluating the accuracy and relevance of AI-generated information, and constructing their own legal reasoning. This requirement is particularly important because empirical research has demonstrated that even specialized legal AI systems can generate inaccurate, incomplete, or hallucinated outputs [4].

5. OPPORTUNITIES OF ARTIFICIAL INTELLIGENCE GENERATION IN LEGAL LEARNING AND RESEARCH

5.1. SUPPORTING THE SEARCH, ANALYSIS, AND SYSTEMATIZATION OF LEGAL DATA SOURCES

The emergence of generative AI tools such as ChatGPT, Gemini, Claude, and Copilot has changed the way learners can access and process information. Through appropriately formulated prompts, students can use these systems to obtain preliminary explanations of legal concepts, summarize documents, organize information, and identify issues requiring further research. In legal education, these functions can reduce the time required for initial information processing and allow students to devote greater attention to subsequent analysis and evaluation.

Generative AI can also support the classification and systematization of legal information according to topic, legal field, relevance, or conceptual relationship. For law students, this function may be useful when dealing with large volumes of legal materials, particularly during the preliminary stages of research. Students can use AI to organize information concerning legislation, case law, legal scholarship, and related materials before independently examining the underlying sources. This application is consistent with the principles of Connectivism, under which learning involves identifying, evaluating, and connecting information distributed across different sources and networks [7].

Another potential application concerns access to international legal knowledge. Generative AI can assist students in translating legal and academic materials, explaining specialized terminology, and comparing concepts expressed in different languages. This may reduce some of the linguistic barriers that students encounter when accessing foreign legal scholarship or comparative legal materials. However, AI-generated translations and explanations should be treated as preliminary assistance rather than authoritative interpretations, particularly where differences in legal terminology and jurisdictional context may affect meaning.

Empirical evidence from higher education illustrates the increasing use of generative AI for these types of learning activities. The Higher Education Policy Institute (HEPI) Student Generative AI Survey 2025 surveyed 1,041 full-time undergraduate students in the United Kingdom. The survey found that the proportion of students reporting use of AI increased from 66% in 2024 to 92% in 2025 [9]. Among the reported uses of generative AI, students most commonly used the technology to explain academic concepts, summarize articles, suggest research ideas, and support the organization of learning content [9].

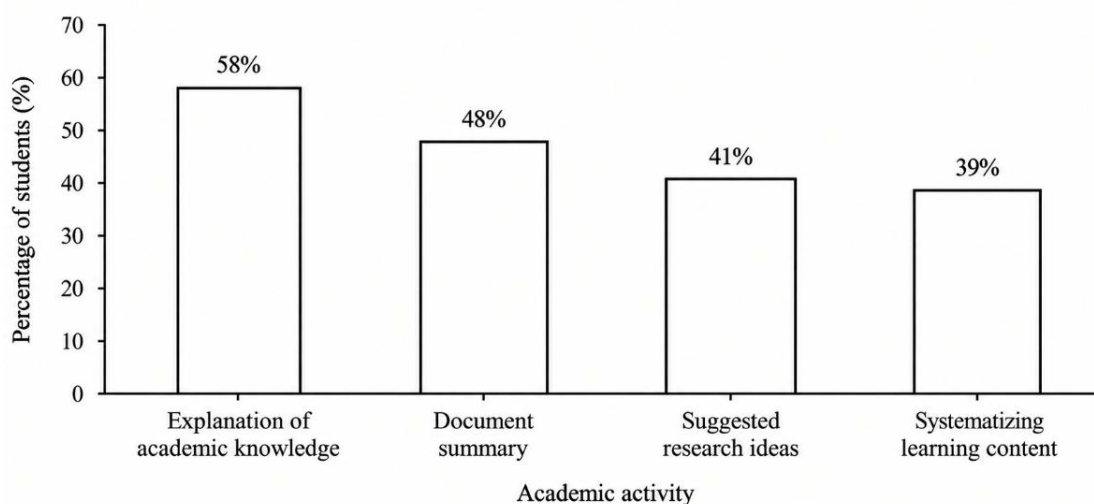


Figure 2: Student Use of Generative AI for Academic Activities.

Source: Freeman, J. (2025), based on the HEPI Student Generative AI Survey 2025 [9].

The same survey also reported an increase in the proportion of students using AI from 66% in 2024 to 92% in 2025 [9].

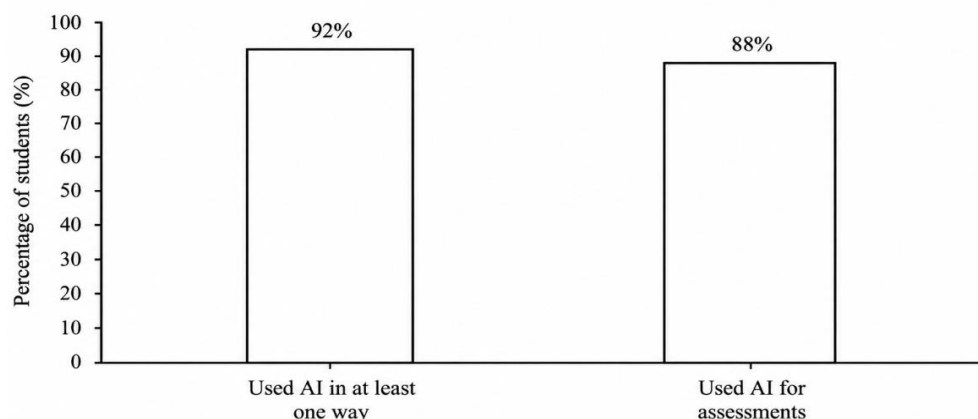


Figure 3: Reported Use of AI among UK Undergraduate Students, 2024–2025

Source: Freeman, J. (2025), Student Generative AI Survey 2025, HEPI Policy Note 61 [9].

The HEPI findings demonstrate that generative AI has become increasingly integrated into academic activities among undergraduate students in the United Kingdom [9]. However, the survey population was not limited to law students. Therefore, the findings cannot by themselves establish that law students use generative AI at the same rates or for exactly the same purposes. Their relevance to legal education lies primarily in illustrating a broader highereducation trend that provides context for examining AI use among law students.

For legal learning and research, this trend suggests that generative AI may increasingly function as an initial information-processing and research-support tool. Students can use AI to formulate preliminary research questions, organize legal materials, clarify unfamiliar concepts, and identify potential directions for further investigation. Nevertheless, the subsequent stages of legal research locating authoritative sources, verifying legal propositions, interpreting applicable rules, evaluating competing arguments, and constructing legally defensible conclusions remain dependent on the student's own critical analysis.

This distinction is particularly important in legal education. Generative AI can facilitate access to and organization of information, but increased access does not necessarily correspond to increased legal understanding. From a Connectivist perspective, the student's role is not simply to obtain information from an AI system but to evaluate the reliability of information and connect it with authoritative legal sources and broader knowledge networks [7]. From the TPACK perspective, effective integration similarly requires the technological capabilities needed to operate AI tools to be combined with appropriate pedagogical approaches and substantive legal knowledge [5].

Accordingly, generative AI should be understood as a supporting mechanism for the search, analysis, and systematization of legal information rather than as a substitute for independent legal research. Its principal opportunity for law students lies in facilitating the early stages of information processing while preserving the student's responsibility for source verification, legal interpretation, and the construction of legal reasoning.

5.2. SUPPORTING THE LEARNING ACTIVITIES AND RESEARCH SKILL DEVELOPMENT OF LAW STUDENTS

Generative AI can support law students throughout different stages of the learning and research process. At the initial stage of academic research, students can use AI systems to identify potential research topics, formulate preliminary research questions, generate relevant keywords, and organize possible research directions. For students who are beginning to develop research skills, these functions can reduce difficulties associated with defining a research problem and structuring the initial stages of an academic project.

Generative AI can also function as an interactive tool through which students examine and develop their own ideas. Rather than using AI only to generate a finished answer, students can ask the system to provide alternative arguments, identify possible counterarguments, explain competing interpretations, or pose questions concerning a particular legal issue. Such interaction can encourage students to reconsider their initial assumptions and examine a legal problem from multiple perspectives. This use is consistent with the constructivist perspective adopted in this study, under which learning involves the active construction and reconstruction of knowledge through interaction and reflection.

For example, when studying legal liability relating to artificial intelligence systems, a student may use generative AI to obtain a preliminary comparison of approaches adopted in different jurisdictions. The student can then use the suggested concepts and keywords to locate the relevant legislation, judicial decisions, and academic literature independently. In this process, AI assists with the organization of the research process, while the student remains responsible for determining whether the identified legal materials are applicable and authoritative.

Generative AI can similarly support the development of legal reasoning through hypothetical scenarios. In a contract-law exercise, for instance, students may ask an AI system to generate a hypothetical dispute involving a breach of a contractual delivery obligation. The student can then analyze the facts, identify the applicable legal rules, construct arguments for the parties, and use AI to generate possible counterarguments. This creates an interactive environment in which the student can repeatedly test and revise a legal argument.

Such applications are particularly relevant to the development of research skills because legal research requires more than locating information. Students must formulate appropriate questions, identify relevant authorities, distinguish reliable sources from unreliable information, interpret legal rules, compare competing arguments, and construct conclusions supported by evidence. Generative AI may assist with some of these preliminary and iterative activities, but it does not remove the student's responsibility for the substantive research process.

The role of AI can therefore be understood as a form of research support rather than research substitution. This distinction is important because AI-generated outputs may contain inaccurate, incomplete, or hallucinated information. Magesh et al. [4] found substantial variation in the reliability of outputs produced by leading AI-assisted legal research tools and GPT-4. Consequently, students who use generative AI for legal research need to verify AI-generated propositions against authoritative legal sources before incorporating them into academic work.

The application of generative AI also provides opportunities for students to develop AI literacy. Effective legal research in an AI-supported environment requires students to understand not only how to formulate prompts and obtain useful outputs, but also how to assess the limitations of the system, verify information, identify potential errors, and determine when additional independent research is necessary. These capabilities correspond to the technological, pedagogical, and content dimensions emphasized by the TPACK framework [5].

From the perspective of Connectivism, generative AI can function as one node within a broader network of legal information rather than as the final source of knowledge [7]. Students must connect information generated by AI with legislation, case law, academic literature, institutional databases, and other authoritative materials. From the perspective of TPACK, the educational value of this process depends on the integration of technological knowledge with appropriate learning strategies and substantive legal knowledge [5].

Accordingly, generative AI offers law students opportunities to strengthen several stages of the learning and research process, particularly topic exploration, question formulation, information organization, comparative analysis, argument development, and simulated problem-solving. However, these opportunities are realized only when students remain active participants in the research process and retain responsibility for source verification, legal interpretation, and the final conclusions of their academic work.

6. CHALLENGES OF ARTIFICIAL INTELLIGENCE GENERATION IN LEGAL LEARNING AND RESEARCH

6.1. THE RISK OF DECLINING CRITICAL THINKING AND ACADEMIC INTEGRITY AMONG LAW STUDENTS

Unlike many other academic fields, legal education requires more than the acquisition and reproduction of knowledge. Law students are expected to interpret legal rules, evaluate competing arguments, apply legal principles to concrete facts, and develop reasoned conclusions. These activities require active intellectual engagement and cannot be reduced to the production of fluent written text.

The increasing ability of generative AI to produce structured answers, summaries, and draft academic texts therefore creates a potential risk of over-reliance. When students use AI primarily to obtain ready-made answers rather than to examine legal issues, test arguments, or verify sources, the learning process may shift from knowledge construction toward content consumption. From the perspective of Constructivism, this is particularly important because meaningful learning requires learners to actively construct and revise their understanding rather than simply receive an apparently complete answer.

Empirical evidence from higher education illustrates the scale of student reliance on generative AI, although the available evidence is not specific to law students. The Higher Education Policy Institute (HEPI) Student Generative AI Survey 2025, based on 1,041 fulltime undergraduate students in the United Kingdom, found that 92% reported using AI in some form and 88% reported using generative AI for assessments. The survey also found that 18% of respondents had included AI-generated text directly in their work [9]. These findings demonstrate the widespread integration of generative AI into student learning and assessment, but they do not by themselves establish that AI use causes a decline in critical thinking or academic performance.

The distinction between AI use and harmful dependence is therefore essential. Generative AI may support learning when students use it to obtain explanations, compare alternative arguments, identify research questions, or receive feedback. Conversely, learning risks may arise when students accept AI-generated content without examining its reasoning, sources, assumptions, or legal accuracy. In this sense, the educational problem is not the existence of AI assistance itself but the manner and degree of student engagement with the technology.

This issue can also be interpreted through Connectivism. In a digital learning environment, students must be able to identify relevant information, evaluate its reliability, and connect information from different sources. Generative AI can function as one node within this information network, but it should not become the student's sole or final source of knowledge. The student's ability to move between AI-generated suggestions, legislation, judicial decisions, scholarly literature, and other authoritative sources remains essential.

From the TPACK perspective, effective AI-supported legal learning requires an appropriate interaction between technological knowledge, pedagogical knowledge, and legal content knowledge [5]. A student who possesses only technological skills may be able to generate sophisticated prompts and polished text without necessarily being able to determine whether the resulting legal analysis is correct. Legal content knowledge and critical evaluation are therefore necessary to transform AI output into meaningful academic learning.

Academic integrity represents a related challenge. The use of AI-generated text raises questions concerning authorship, disclosure, originality, and the student's actual intellectual contribution. HEPI's 2025 survey also found that 53% of students identified the risk of being accused of cheating as a factor discouraging AI use, while only 36% reported having received AI-skills training from their institution [9]. This indicates that the development of institutional guidance and student AI literacy is important alongside the development of technological skills.

Accordingly, generative AI should be treated as a supporting resource rather than a substitute for independent legal reasoning. For law students, maintaining responsibility for interpreting legal materials, evaluating arguments, verifying sources, and formulating conclusions is essential to ensuring that technological assistance contributes to learning rather than merely accelerating the production of academic text.

6.2. THE RELIABILITY, ACADEMIC RESPONSIBILITY, AND LIMITATIONS OF AI IN LEGAL RESEARCH

Reliability is a particularly important concern in legal research because a legal argument depends not only on the plausibility of its wording but also on the accuracy of the underlying legal authority, factual context, and interpretation. Generative AI systems may produce fluent and apparently authoritative responses while nevertheless containing inaccurate, incomplete, or fabricated information. This phenomenon is commonly referred to as AI hallucination.

Magesh et al. [4] provide empirical evidence of this problem in the context of AI-assisted legal research. Their study evaluated several leading legal AI research tools and GPT4 and found substantial differences in the accuracy, incompleteness, and hallucination rates of the systems examined. The study reported hallucination rates of 17% for Lexis+ AI, 33% for Westlaw AI-Assisted Research, 17% for Ask Practical Law AI, and 43% for GPT-4 [4]. These results do not mean that every output produced by these systems is unreliable. Rather, they demonstrate that AI-generated legal research cannot be treated as inherently authoritative and requires independent verification.

The risk of fabricated legal authorities is also illustrated by *Mata v. Avianca, Inc.* [10]. In that 2023 proceeding before the U.S. District Court for the Southern District of New York, attorneys submitted non-existent judicial opinions and citations generated by ChatGPT. The court subsequently imposed sanctions and emphasized the attorneys' responsibility to verify the accuracy of material submitted to the court [10]. The case provides a concrete example of the consequences that may arise when AI-generated legal information is accepted without adequate verification.

For law students, the lesson from these examples is particularly significant. AI should not be treated as an independent source of legal authority. When using generative AI for legal research, students should verify statutes, regulations, judicial decisions, quotations, case citations, and academic references against authoritative primary or reliable secondary sources. AI-generated information may assist in identifying possible research directions, but the responsibility for determining whether a legal proposition is correct remains with the researcher.

The reliability problem is also connected to the concept of Connectivism. If knowledge is distributed across interconnected information networks, effective learning requires students to evaluate the reliability of individual nodes before incorporating information into their knowledge structure. Generative AI can facilitate connections among legal concepts and sources, but it can also introduce inaccurate information into that network. Critical source evaluation is therefore an essential component of AI-supported legal research.

Academic responsibility constitutes a further limitation. When students use generative AI in preparing a paper, presentation, or research project, they remain responsible for the accuracy and integrity of the final work. The use of AI does not transfer academic responsibility to the technology. Students must therefore understand what the system has contributed, verify its substantive claims, and comply with applicable institutional rules concerning disclosure and academic integrity.

The problem also concerns the limits of current empirical evidence. Much of the available evidence on generative AI comes from higher education generally or from the legal profession rather than specifically from law students. For example, the HEPI survey provides useful evidence regarding undergraduate students in the United Kingdom, while Magesh et al. examine AI-assisted legal research tools in a professional legal-research context [4], [9]. These findings are relevant to legal education but should not be interpreted as direct measurements of the experiences or outcomes of law students in every jurisdiction.

Therefore, the appropriate approach is neither to assume that generative AI is inherently unreliable nor to treat its outputs as automatically trustworthy. Instead, AI-supported legal learning and research should be based on a verification-centered model in which AI assists with information access, organization, explanation, and exploration, while students retain responsibility for source verification, legal reasoning, academic integrity, and final conclusions.

In this framework, the central limitation of generative AI is not simply that it can make mistakes. More fundamentally, its outputs must be interpreted within the legal, educational, and ethical context in which they are used. For law students, technological competence must therefore be accompanied by legal knowledge, critical reasoning, and AI literacy.

7. RECOMMENDATIONS TO ENHANCE THE EFFECTIVENESS OF GENERATIVE ARTIFICIAL INTELLIGENCE APPLICATIONS IN LEGAL LEARNING AND RESEARCH

7.1. BUILDING RESPONSIBLE AI USAGE CAPABILITIES FOR LAW STUDENTS

One of the most important requirements in the integration of generative AI into legal education is to develop students' ability to use AI proactively, selectively, critically, and with academic responsibility. AI literacy should therefore become an important component of contemporary legal education. Law students need not only to understand how to operate AI tools but also to recognize their limitations, particularly in relation to legal reasoning, source verification, academic integrity, and the potential generation of inaccurate information [8].

First, students should use generative AI primarily as a supporting resource rather than as a substitute for independent legal analysis. AI can assist in identifying possible research topics, generating preliminary research questions, organizing materials, explaining difficult concepts, or simulating hypothetical legal situations. However, the formulation of legal arguments, evaluation of competing interpretations, verification of legal authorities, and final conclusions should remain the student's responsibility. This approach is consistent with the Constructivist perspective, under which meaningful learning requires active participation in the construction and evaluation of knowledge.

Second, students should develop systematic verification practices. AI-generated statutes, judicial decisions, quotations, case citations, academic references, and factual propositions should be checked against authoritative legal sources before being incorporated into academic work. The empirical findings of Magesh et al. [4] demonstrate why such verification is necessary: AI-assisted legal research tools may produce inaccurate, incomplete, or hallucinated information. Verification should therefore be treated not as an optional additional step but as an integral part of AI-supported legal research.

Third, students should develop the ability to formulate effective prompts while avoiding excessive dependence on prompt-generated answers. Prompting skills are useful for obtaining alternative explanations, counterarguments, comparative perspectives, and hypothetical scenarios. Nevertheless, the purpose of prompting in legal education should be to stimulate analysis rather than to outsource analysis. In this respect, Connectivism emphasizes the student's ability to evaluate and connect information from multiple sources, while TPACK highlights the need to integrate technological competence with pedagogical and legal content knowledge [5], [7].

Fourth, students should maintain transparency concerning their use of generative AI. Where institutional rules require or permit disclosure, students should identify the role of AI in activities such as brainstorming, language editing, summarization, or preliminary drafting. Such disclosure helps distinguish legitimate technological assistance from the submission of AI-generated work as entirely independent intellectual work. Clear disclosure practices can also strengthen academic accountability by making the student's actual contribution more transparent.

7.2. IMPROVING MANAGEMENT MECHANISMS AND INNOVATING LEGAL TRAINING METHODS IN THE AI ERA

The effective integration of generative AI cannot depend exclusively on individual student behavior. Faculty members, law schools, and educational institutions also need to develop appropriate pedagogical and management mechanisms. This requirement is consistent with the TPACK framework because the educational value of technology depends not only on the availability of technological tools but also on how those tools are integrated with pedagogical objectives and subject-specific knowledge [5].

For faculty members, teaching methods should increasingly emphasize activities that require students to demonstrate individual reasoning and application of legal knowledge. Case analysis, legal debate, moot court exercises, negotiation simulations, problem-based learning, and comparative legal analysis can be used to require students to explain how they reached a conclusion rather than merely submit a final written answer. AI may be incorporated into these activities as a tool for generating hypothetical arguments, identifying counterarguments, or simulating opposing positions, while students remain responsible for evaluating the legal validity of the outputs.

For law schools and universities, clear institutional guidelines should be established concerning the permissible use of generative AI in learning and research. Such guidelines should distinguish between different forms of AI assistance, including brainstorming, translation, language editing, summarization, research assistance, and substantive content generation. They should also clarify students' responsibility for verifying AI-generated information and, where appropriate,

disclosing the extent of AI assistance. UNESCO's guidance on AI and education emphasizes the importance of a human-centered approach to the educational use of AI [8].

Assessment mechanisms should also be adapted to the changing technological environment. Assignments that can be completed primarily by reproducing generic information are more difficult to use as reliable measures of individual learning when generative AI is widely accessible. Legal education can therefore place greater emphasis on oral defense, individualized case analysis, reflective explanations, problem-solving exercises, and tasks requiring students to apply legal rules to specific factual situations. These approaches do not seek to eliminate AI from education; instead, they make the student's reasoning process a more visible component of assessment.

Law schools should also provide structured AI-literacy training for both students and faculty. Such training should cover basic operation of generative AI systems, prompt formulation, source verification, hallucination detection, privacy and confidentiality, copyright and academic integrity, and the responsible handling of legal information. The training should be connected directly to legal research and legal problem-solving rather than treated solely as a general technological skills course.

For technology providers, the development of AI systems used in legal education should place greater emphasis on reliability, source traceability, transparency, and appropriate safeguards. Where legal AI tools provide citations or legal authorities, users should be able to inspect and verify the underlying sources. The empirical evidence reported by Magesh et al. [4] indicates that differences in accuracy, incompleteness, and hallucination rates remain relevant to legal AI systems. Consequently, technological development should be accompanied by mechanisms that facilitate human verification rather than encouraging users to accept generated answers without scrutiny.

Finally, greater collaboration between legal education and technology disciplines is necessary. Generative AI is not solely a technological issue; it affects legal research, legal practice, academic integrity, privacy, governance, and professional ethics. Interdisciplinary cooperation can therefore help law students understand both the capabilities and limitations of AI while enabling educators to design learning activities that integrate technological competence with legal reasoning.

Overall, effective integration of generative AI in legal education requires a coordinated approach involving students, faculty members, educational institutions, and technology providers. The objective should not be simply to increase the use of AI, but to establish conditions under which technological assistance strengthens legal learning while preserving independent reasoning, source verification, academic responsibility, and human judgment.

CONCLUSION

Generative Artificial Intelligence offers significant potential to support law students in accessing legal information, developing research ideas, analyzing legal issues, and engaging in interactive learning activities. However, its value depends on students' ability to use the technology critically and responsibly. AI-generated outputs should therefore be treated as supporting information rather than as substitutes for authoritative legal sources or independent legal reasoning.

Effective AI-assisted legal learning requires students to remain active in knowledge construction, information evaluation, and legal analysis. Generative AI should function as a supporting resource rather than replace students' critical thinking, academic responsibility, and legal judgment.

Accordingly, legal education should integrate AI-related skills with legal knowledge, critical thinking, and ethical awareness. Future research should further examine the long-term effects of generative AI on law students' independent legal reasoning across different legal and educational contexts.

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