

FOREIGN LANGUAGES AND VIETNAMESE

UTILIZING ARTIFICIAL INTELLIGENCE IN PROJECT-BASED LEARNING FOR LEGAL ENGLISH: A QUANTITATIVE ANALYSIS OF UNDERGRADUATE LAW STUDENTS

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ABSTRACT: Over the past decade, the integration of project-based learning (PBL) with digital technologies has garnered significant attention in specialized fields such as Legal English. By immersing learners in realistic tasks bridging theory and practical application, PBL fosters deeper engagement and skill development. This study examines how artificial intelligence (AI) can be employed at every PBL stage to bolster students' legal knowledge and language proficiency. A quantitative survey was conducted with 295 students enrolled in PBL oriented Legal English programs across two institutions, utilizing a five point Likert scale to measure perceptions of AI usage. Data analysis via SPSS 30.0 revealed that students perceive AI driven tools as especially beneficial for planning, research, and writing tasks, enabling them to focus on more creative and analytical problem solving. Results emphasize the necessity of human collaboration and ongoing reflective feedback, suggesting that AI is most effective when combined with learner-centered engagement.

KEY WORDS: artificial intelligence; learner-centered engagement; legal English; project-based learning.

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1. Introduction

Within contemporary education, PBL has emerged as a particularly efficient pedagogical model by placing active, student-driven engagement at the center of instruction. In contrast to traditional lecture-based approaches, PBL envelops learners in authentic, multidisciplinary projects that promote deeper critical thinking, collaborative problem-solving, and cross-disciplinary engagement (Kim Anh, 2024; Nguyen & Vu, 2024; Wu & Chang, 2023). Through meaningful, hands-on experiences, students gain a more robust understanding of course content, strengthen their long-term retention, and promote their ability to apply theoretical knowledge to practical situations (Nguyen & Vu, 2024). Moreover, PBL fits with 21st-century learning paradigms as education changes in response to technological developments by arming students with the tools required to navigate ever changing work environments. In the field of legal English (a branch of English for Specific Purposes, ESP), PBL offers opportunities for experiential learning by means of real-world or simulated legal assignments, hence promoting understanding of essential legal principles in conjunction with the cultivation of foundational career skills (Carpenter, 2020). In particular, the use of digital technologies, such as AI, further magnifies the impact of PBL by providing customized educational trajectories, enabling project administration, and delivering fast feedback (Dakakni & Safa, 2023; Kusam, 2024; Saffaf, 2023). Legal English classes take advantage of this experiential approach since it permits students to get accustomed to constantly altering legal practices through ongoing, self-directed participation in realistic legal activities. As a result, the convergence of PBL and AI envisions a dynamic, technologically enhanced educational environment in which learners interact with substantive legal projects under the guidance of AI as a responsive and supportive resource.

Building on recent developments in English-language instruction, several studies (Bretan, 2024; Xatamova & Ashurov, 2024) offered notable benefits of AI integration into Legal English education

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to both students and instructors. From the student perspective, AI tools tailor language acquisition by providing individualized instructional content, immediate feedback, and adaptive tasks that align with each learner's proficiency (Y. Chen, 2024). Such platforms support building legal terminology, enhance grammatical accuracy, and improve pronunciation through speech-recognition capabilities. AI-driven writing assistants also contribute to clarity and precision in legal drafting, strengthening greater confidence in professional communication. Additionally, AI-based interactive simulations and virtual role-play sessions expose learners to practical, context-driven experiences that sharpen analytical and critical thinking abilities. From an instructional perspective, AI reduces administrative workload such as grading and offers detailed, data-driven insights into student progress, enabling instructors to identify and resolve common linguistic challenges (Fitria, 2021). Furthermore, AI-driven content generators facilitate the development of customized learning materials and exercises that align with specific course objectives (Xatamova & Ashurov, 2024). By leveraging AI in this manner, educators can cultivate student-centered learning environments that enhance engagement while simultaneously optimizing pedagogical efficiency.

Although researchers have shown increasing interest in using AI within PBL, relatively little attention has been paid to how these ideas might benefit Legal English courses. In fact, there appear to be no published studies that directly explore AI-assisted PBL for Legal English instruction. Existing work on AI in PBL tends to focus on two major themes: (1) proposed frameworks that outline how AI can support PBL, and (2) surveys capturing teachers' or students' views on adopting AI for project work. For instance, some scholars have sketched out possible stages where AI tools (e.g., chatbots, adaptive platforms) could help manage tasks from planning to final assessment (Tang et al., 2024). Others have gathered feedback on how users experience AI in real project scenarios. One recent experiment found that students who employed AI applications during a PBL assignment reported that the tools were straightforward to use and boosted their project outcomes (Rostam et al., 2024). Likewise, a broader survey reported that teachers considered AI-powered PBL to be more effective than traditional PBL alone (Ruiz Viruel et al., 2025). However, in the legal English courses, such integration remains under-explored. In response to this gap, the article shares original insights into how AI-based PBL could support students in learning legal English by addressing the key question below:

- How do students perceive the application of AI at different stages of the PBL implementation in a Legal English course?

2. Integrating artificial intelligence into project-based learning for legal English: Application across implementation stages from students' perspective

Legal English centers on the language utilized in legal settings and encompasses multiple competencies, from reading and interpreting statutes or legal documents to drafting pleadings and delivering oral arguments. Frequently referred to as "legalese", this highly specialized form of communication is recognized by its distinctive vocabulary, structural patterns, and stylistic conventions (Veretina, 2012). Because of these complexities, students must develop proficiency in specialized vocabulary, master various grammatical elements, and become familiar with legal principles and methods of reasoning. Against this backdrop, PBL offers an innovative approach to teaching legal English, emphasizing active learning, collaboration, and the application of knowledge in practical settings (Nguyen & Vu, 2024). Here, PBL can take the shape of simulations and role-plays or the production of legal documents, allowing learners to apply language skills in quasi-professional legal scenarios. Various researchers (Jalinus et al., 2017; S & Sunra, 2024) have proposed different approaches to integrating PBL into educational contexts. Among these, a widely recognized seven-stage PBL model has been developed, encompassing formulating expected learning outcomes, understanding the concept of teaching material, skill training, designing the project theme, making the project proposal, executing the project task, and presenting the project report. However,

alternative models, such as those presented by (Tang et al., 2024; Yulhendri et al., 2023), expand upon this framework by incorporating an additional evaluation phase. This stage emphasizes self-assessment, peer evaluation, group mutual assessment, and group self-assessment, reinforcing reflective learning and continuous improvement.

Meanwhile, the rapid advancement of artificial intelligence, especially generative AI, is revolutionizing language education, especially in Legal English. Modern AI systems can now perform complex language tasks from answering questions and drafting documents to translating and summarizing text with a proficiency that was unimaginable a few years ago. Particularly for Legal English, which combines language learning with legal content, AI has the dual potential to act as a language assistant and a legal research assistant. Based on the study by Tang et al. (2024), the application of AI in the implementation of PBL consists of six stages: Identification of projects, Plan development, Activity exploration, Production, Exchange of results, and Evaluation of activities, as illustrated in Figure 1 below.

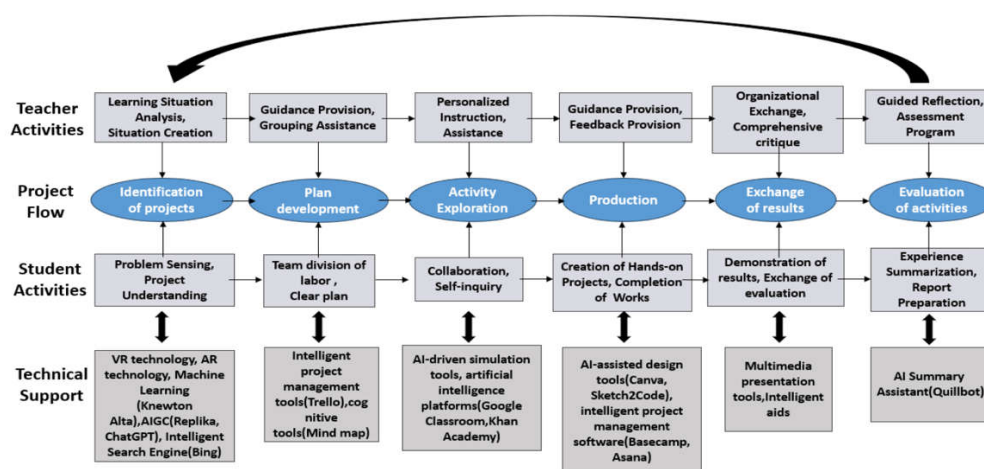


Figure 1. The implementation process of AI-supported PBL (Tang et al., 2024, p. 225)

While the aforesaid AI-supported PBL model proposed provides a structured approach to integrating AI across different learning stages, its principles are particularly relevant to specialized language education contexts, such as Legal English.

Stage 1: Identification of projects

After students select an appropriate project topic based on their language skills, personal interests, and instructor recommendations, they often use AI tools to explore and clarify specific legal issues. Traditionally, until the teacher has given a preliminary overview of the legal topic, students start using AI-based search engines and chatbots to find necessary background information, decode challenging issues, and narrow down their research objectives. At this stage, students also explicitly define the priority level for each project goal, distinguishing clearly between knowledge-related objectives and attitudinal goals to facilitate focused and meaningful learning outcomes (Biggs et al., 2022). These AI tools aid students by generating appropriate study questions, recommending applicable legal scenarios, and providing immediate, tailored feedback through realistic, dialogue-based interactions that mimic human conversations (Klimova et al., 2024; Tang et al., 2024). This method enables students to define their project scope and closely correspond their findings with practical legal scenarios.

Stage 2: Plan development

When students have selected a suitable project topic with guidance from instructors, the next crucial step is to carefully plan the project's execution. AI-powered resource forecasting tools enable

students to predict time requirements for specific legal research tasks with greater accuracy, helping teams construct realistic schedules and effectively manage project deadlines. This predictive capability is valuable in legal projects where research complexity can vary dramatically based on topics. Students can leverage AI platforms to analyze historical data on similar legal projects, creating more informed time estimates and preventing the common pitfall of underestimating research requirements. Additionally, AI facilitates intelligent skills matching within student teams, evaluating team members' strengths to optimize task assignments. In Legal English, where tasks may range from case analysis to document drafting to presentation preparation, this approach ensures students work on components that maximize their contributions while developing their skills.

Stage 3: Activity exploration

In the exploration stage of Legal English projects, students delve deeper into their research topics by examining materials provided by instructors alongside supplementary resources generated by AI platforms (Tang et al., 2024). Rather than becoming stalled by difficult material, learners actively employ AI-based search engines and conversational tools to extract key information from complex legal texts, summarize cases, and obtain answers to specific legal queries (Son et al., 2023). On top of that, collaboration is further enhanced by these AI platforms, allowing students to exchange ideas, discuss varying interpretations of legal issues, and collectively develop new perspectives. Through structured interactive group discussions, students develop both their Legal English proficiency and collaborative problem-solving abilities.

Stage 4: Production

In the production phase, students concentrate on crafting tangible outputs such as drafting legal memoranda, preparing contract clauses, or formulating persuasive arguments. Given the intricacies of Legal English, which is characterized by formal registers, precise vocabulary, and specific rhetorical conventions, students can significantly benefit from utilizing AI-supported writing and editing tools. These platforms expedite the detection and correction of vocabulary and grammatical errors, thereby enabling learners to produce more refined written work with enhanced accuracy and coherence (Son et al., 2023). Furthermore, these tools assist students in ensuring that their writing adheres to logical structures and meets professional standards, an essential skill in producing high-quality legal documents. Beyond writing assistance, AI technologies effectively support learners' development of oral argumentation skills (Son et al., 2023). For instance, students can hone their advocacy skills by engaging with conversational chatbots that simulate real courtroom interactions, acting as virtual judges or opposing counsels. These interactive exchanges offer learners the opportunity to articulate their arguments clearly, receive critical feedback, and progressively refine their persuasive abilities through ongoing practice. Additionally, generative AI systems provide students with valuable examples and creative suggestions, facilitating the drafting and editing process of complex legal texts (Fitria, 2021).

Stage 5: Exchange of results

As students prepare for their presentations, they should develop supporting materials, including slides, posters, models, or other visual aids, depending on the chosen presentation format. AI technologies can assist students significantly during this preparation stage. For example, students may use AI tools to effectively identify key points for emphasis, generate concise and coherent summaries, and anticipate potential critical questions. AI-driven speech recognition platforms can also provide real-time feedback on students' pronunciation, pacing, and use of specialized legal vocabulary, enabling them to refine their presentations. Moreover, these tools allow students to practice responses to challenging questions in advance, helping them better address unexpected queries during the actual presentations. After presentations, AI-supported platforms facilitate the rapid collection and categorization of feedback from teachers and peers based on established evaluation criteria, thus streamlining the overall review and reflection process.

Stage 6: Evaluation of activities

The evaluation phase represents a crucial final step in the project-based learning process. At this stage, students reflect upon their personal performance, identify challenges encountered, and clearly articulate key lessons learned throughout the project. Additionally, they examine how this newfound knowledge might influence their future studies or real-life contexts. During the evaluation sessions, students exchange insights on teamwork effectiveness and innovative ideas developed during their collaboration. To effectively capture and summarize key outcomes from their projects, students can utilize AI tools which assist in distilling core information and identifying major themes. Moreover, students are encouraged to prepare comprehensive final reports detailing the project's process, significant lessons, individual contributions, and critical feedback received from peers and instructors. AI technologies further support this reflective process by helping students systematically organize their experiences and draw meaningful conclusions from their project activities.

3. Exploring students' perceptions of artificial intelligence integration throughout the entire project-based learning process for legal English

This study explores students' perceptions of AI integration in PBL for Legal English, focusing on how learners engage with AI tools throughout their coursework. The sample consists of 295 students who completed Legal English as an elective course, with 134 participants from Procuratorate University and 159 participants from the Vietnam Court Academy. All students were enrolled in a PBL-oriented curriculum, where project-based methodologies formed the core of their learning process. Throughout the course, instructors actively encouraged students to incorporate AI applications into their implementation to enhance their academic and practical engagement with the subject matter. A quantitative survey approach was employed as the primary research method, utilizing a structured questionnaire to gather data on students' experiences. The questionnaire comprised 26 items, measured on a five-point Likert scale, adapted from research content from Tang et al. (2024). The reliability of the questionnaire was confirmed through Cronbach's Alpha, which yielded a highly reliable score of 0.978. This high reliability indicates that the questionnaire items consistently measured students' perceptions of AI integration across all stages of the PBL process. After that, data collected from the survey were analyzed using SPSS 30.0. Descriptive statistical analyses were conducted, with key measures including Mean (M) and Standard Deviation (SD) to provide a clear overview of students' responses.

3.1. Identification of projects

Table 1. Students' perceptions of AI integration in the identification of projects for PBL in Legal English

Statements	M	SD
1. Clearly defining the scope of the research project according to the instructor's requirements.	3,66	0,948
2. Supporting the formulation of key research questions.	3,85	0,931
3. Identifying the priority levels of each project objective (knowledge-based objectives and attitudinal objectives).	3,63	1,001
4. Aligning project objectives with real-world events and project timelines.	3,66	0,983

Table 1 indicates that most students expressed agreement regarding the support provided by AI in the initial phase of their studies. Specifically, concerning Statements 1 and 2, which address the scope and key research questions, students perceived technology-based support during this stage as highly effective due to AI's capability to offer immediate and visually oriented feedback. These findings are in agreement with those reported by (Huang et al., 2024), who demonstrated that students become more proactive and responsible in their learning when aware that AI can deliver timely, personalized

responses tailored to their individual needs. Its advantage is particularly evident when students proactively pose guiding questions such as, “Which laws govern this case?” or “What practical factors should be considered when drafting a civil contract?”, etc. Nevertheless, excessive dependence on AI for formulating questions may impede students' development of critical thinking and independent research abilities. Regarding learning objectives (Statements 3 and 4), students strongly agreed on the importance of clearly defining project goals and prioritizing them due to limited resources such as time, personnel, and tools. Proper prioritization ensures efficient resource use, prevents unnecessary or scattered efforts, and promotes successful project outcomes. Furthermore, students acknowledged that connecting projects to real-world contexts significantly enhances their practical relevance, thereby increasing student engagement, motivation, and enthusiasm in classroom activities (X. Chen et al., 2025).

3.2. Plan development

Table 2. Students' perceptions of AI integration in plan development for PBL in Legal English

Statements	M	SD
1. Assigning tasks effectively based on each member's strengths.	3,27	1,242
2. Creating detailed task plans for easier management and tracking.	3,58	1,157
3. Allocating project timeframes appropriately.	3,59	1,109
4. Improving collaboration with other team members.	3,48	1,186
5. Anticipating potential risks during the project implementation process.	3,64	1,081

In addition, a significant number of students disagreed with the perspective presented in Statement 1, which suggested that AI can effectively identify the strengths of individual members and thereby optimize task allocation. This skepticism is reasonable because task delegation within PBL groups requires not only data about skills but also consideration of psychological factors, interpersonal relationships, and personal preferences. This argument is reinforced by (Siemon, 2022), who asserts that social and emotional intelligence plays a crucial role when assigning tasks to human teammates. In contrast to Statement 1, the remaining statements received broad agreement from students, all of which highlight the benefits AI brings to PBL. Firstly, AI can suggest a structured task plan based on logical sequences, timelines, and priority levels, making it easier for groups to manage and track their progress. During this process, instructors should encourage students to review, adjust, and discuss AI-generated suggestions instead of relying solely on “the machine”. Secondly, within a PBL project, time is not merely a measure of “days to completion” but also reflects the progress of learning, exchanging ideas, and verifying results (Xatamova & Ashurov, 2024). While AI can help establish milestones, these should be adjusted flexibly when real-life situations arise. By utilizing feedback loops, AI can provide suggestions that align more closely with the specific needs of each group. Moreover, AI can provide suggestions tailored to each group's needs. However, constant reliance on a single AI platform may limit learners' thinking, leading them to unintentionally adopt misinformation or biases embedded in the AI's training data (“Bias in a Feedback Loop,” 2018). Thirdly, AI-online platform contributes to creating a connected information environment by facilitating the sharing of documents and ideas while also suggesting more effective communication methods among members (Olan et al., 2022; Tang et al., 2024). Although AI can automate basic group management and communication tasks such as suggesting meeting times and organizing information flow, it cannot replace the empathy, motivation, and conflict resolution skills that require human understanding. Finally, AI can identify “blind spots” or potential risks, allowing the group to take timely preventive measures. Often, AI-generated content provides practical advice, guiding students on what to do and how to proceed to smoothen the process and minimize risks. For instance, a blind spot could be a team overlooking important background research or failing to consider how

certain tasks might overlap and cause delays. Meanwhile, a risk could be setting unrealistic deadlines for a complex task or relying too heavily on one team member's expertise, making the project vulnerable if that person becomes unavailable.

3.3. Activity exploration

Table 3. *Students' perceptions of AI integration in activity exploration for PBL in Legal English*

Statements	M	SD
1. Saving time when searching for relevant materials.	3,84	1,033
2. Easily analyzing aspects that need to be researched.	3,93	0,962
3. Translating and comprehending legal concepts.	3,82	1,005
4. Gaining a clearer understanding of typical legal situations related to the research topic.	3,80	0,995
5. Enhancing the ability to communicate and ask questions during group discussions	3,83	0,999

It can be seen from the data in Table 3 that respondents generally expressed strong agreement with all the statements, with M ranging from 3.80 to 3.93. Regarding the dimension of information search and analysis in Statements 1 and 2, students highlighted how AI markedly reduces the time spent sifting through legal databases, case law, and reference materials. This is consistent with the literature of (Campbell, 2020) on how AI operates within courtroom settings. At the same time, they recognized AI's potential to help identify relevant subtopics or break down complex legal issues. Under the PBL approach, learners are typically presented with a real-world case or scenario and encouraged to conduct independent research before reconvening for group discussions (Rostam et al., 2024). This experiential style of learning makes Legal English more practical by allowing students to visualize the legal context. While AI expedites the data-gathering process, over-reliance on AI-generated suggestions risks undermining the development of critical thinking and "deep-dive" research skills. In terms of understanding and applying specialized knowledge in Statements 3 and 4, the ability to translate and interpret complex legal concepts is vital in Legal English. With an average rating of 3.82 for Statement 3, respondents showed considerable confidence in AI to clarify specialized terminology and intricate legal documents. Meanwhile, Statement 4 emphasizes how AI can assist in clarifying legal contexts: students can more easily retrieve model documents, international cases, and simulate practical scenarios based on the legal environment they provide (Xatamova & Ashurov, 2024). Such functions are crucial in PBL, where contextualizing and applying theoretical knowledge to tangible situations is key. Finally, with regard to enhancing group communication in Statement 5, the PBL model places a high value on teamwork, in which dialogue and questioning are the bedrock of mutual exchange and critical debate. Here, AI is viewed as a potential "virtual advisor", suggesting talking points or critical questions prior to group discussions.

3.4. Production

Table 4. *Students' perceptions of AI integration in production for PBL in Legal English*

Statements	M	SD
1. Quickly and accurately checking and correcting English vocabulary and grammar errors.	3,79	0,979
2. Producing logically structured writing with appropriate presentation style.	3,79	0,988
3. Conveniently designing attractive slides for the project.	3,63	1,093
4. Rapidly improving project outputs by receiving feedback from instructors via AI platforms.	3,73	1,025

The figure point out that most students agree AI plays a pivotal role in supporting writing and editing processes. From Statements 1 and 2, learners observe that AI not only helps spot basic mistakes (such as spelling or grammar) but also tackles more advanced issues, especially in the realm of legalese, known for its Latin terms, lengthy sentences, and formal style. This finding seems to be consistent with (Guesseir, 2025), who asserts that AI-based editing tools can clarify meaning, strengthen coherence, and enhance overall accuracy in legal writing. That said, while AI might suggest a logical structure or flow of arguments, the writer must still exercise critical thinking by asking, for instance, “Why should I present this idea first?” or “Have I fully captured the main point?” tasks that AI alone cannot fulfill. Notably, peer review remains vital to broaden perspectives and prevent complete reliance on AI-generated solutions in PBL settings. Turning to Statement 3, students appreciate how AI can streamline slide design such as quickly creating layouts, summarizing key points, or embedding relevant visuals. Tools like Canva or ChatGPT have these built-in features, thus saving time and making presentations more appealing (Gottlieb et al., 2024). Even so, students must carefully select and refine these suggestions to avoid overly crowded slides or a disconnect between content and design. Lastly, Statement 4 highlights the value of feedback in boosting the quality of project outcomes. Within PBL, instructors can employ AI as a semi-automated feedback channel, flagging common errors, proposing fixes, or pointing to specialized references (Belda-Medina & Calvo-Ferrer, 2022). This approach reduces the need for manual line-by-line review, allowing instructors to focus on deeper evaluations such as the logic of arguments or the relevance of cited materials. Still, individualized feedback and in-depth discussions ultimately require human interaction, preserving the “humanize” factor essential for meaningful learning and professional growth.

3.5. Exchange of results

Table 5. *Students' perceptions of AI integration in the exchange of results for PBL in Legal English*

Statements	M	SD
1. Selecting key points to emphasize in the presentation.	3,73	0,977
2. Simulating potential rebuttal questions and preparing answers in advance.	3,76	1,014
3. Better handling unexpected questions during the presentation.	3,83	0,959
4. Quickly collecting and categorizing feedback from instructors and peers based on specific criteria.	3,72	0,992

It is obvious that all mean scores cluster in the 3.70–3.83 range, indicating a generally positive stance. Meanwhile, standard deviations lie between 0.955–1.014, suggesting moderate variability in student perceptions. With respect to content consolidation, learners acknowledge that AI can effectively filter and condense materials, highlighting relevant information and omitting less critical points. This allows them to concentrate on more pressing tasks. Nonetheless, it remains essential for learners to crosscheck any AI generated output with their group's objectives to avoid overlooking secondary points that might still be important. Moreover, by narrowing the focus to core ideas, students can deliver concise yet accessible presentations. These observations correspond with (Shen et al., 2023), who suggest that AI-based summarization not only curates external documents and novel knowledge but also represents the author's meaning-making process, revealing new opportunities for AI-assisted design in the spheres of reading, reflection, and writing. Also, students agree that AI can simulate rebuttal questions by offering immediate feedback, helping them become less startled by challenging inquiries posed by peers or instructors. Beyond simply generating potential counterarguments, AI further improves students' ability to respond spontaneously. By providing varied perspectives, it helps them discern strengths and weaknesses in their reasoning

(Ateeq et al., 2024). However, if an instructor presents an unexpected twist that goes beyond AI's scripted scenarios, learners may still feel unsettled or anxious. Before finalizing their submissions, students can take advantage of AI driven tools to incorporate observations regarding content, organization, and overall argument clarity, thereby enhancing the effectiveness of their work (Song & Song, 2023). By gathering and classifying comments according to relevance or urgency, AI helps students devote more time to resolving key issues, rather than sifting through mountains of feedback on their own.

3.6. Evaluation of activities

Table 6. *Students' perceptions of AI integration in the evaluation of activities for PBL in Legal English*

Statements	M	SD
1. Gaining clearer awareness of personal strengths and weaknesses.	3,58	1,047
2. Identifying skills that need improvement for future projects.	3,74	0,985
3. Learning and organizing lessons and experiences from working on the entire project.	3,76	0,972
4. Improving problem-solving skills after completing the project.	3,79	1,006

The results presented in Table 6 indicate that the mean scores for the four statements range from 3.58 to 3.79, suggesting a relatively high degree of consensus among students regarding the supportive role of AI during the evaluation phase of PBL activities in Legal English. Standard deviations between approximately 0.97 and 1.05 reveal some variability in individual experiences, potentially influenced by students' technological proficiency or varying methods of AI integration across groups. Overall, students appear to trust AI in two main areas. First, in personal awareness (corresponding to Statements 1 and 2), they value AI as a tool for self assessment of strengths and weaknesses, as well as for organizing knowledge after the project concludes. In this respect, AI can track posting frequency, discussion contributions, or on time task completion. When these metrics are compared across group members, those who are less active discover gaps in initiative or time management (Dai et al., 2025). In drafting legal documents, AI provides detailed feedback on clarity, coherence, and potential linguistic errors. This automated overview helps learners evaluate their writing performance and identify ways to improve. Once the learner recognizes these skill gaps, AI further suggests online courses, academic references, or case studies, enabling students to hone specific abilities such as case research, legal argumentation, or English debating techniques. Second, in the areas of lesson organization and problem solving skills (linked with Statements 3 and 4), AI functions as an analytical engine that aids students in reflecting on their experiences and optimizing their approach to legal scenarios. By reviewing all discussion content, AI can generate conceptual maps highlighting main themes and relevant connections, or recommend a well structured outline for final reports. This capacity to classify, filter, and link ideas saves considerable time and effort, which is especially beneficial in Legal English contexts with extensive codes, case law, and hypothetical issues. Notably, problem solving skills (statement 4) receive the highest mean score, implying that AI does more than simply organize information. It also helps orient the group's reasoning. For instance, when examining a chosen solution path, AI may pinpoint ambiguities or highlight areas lacking evidence, prompting the group to learn from mistakes and adopt better strategies in subsequent projects. Some chatbots even simulate an opposing counsel's position, compelling students to defend solution A against critique B. This approach fosters deeper critical thinking and improves the legal argumentation capacity of learners (Wang & Yang, 2024).

4. Conclusion

The investigation of how AI supports Legal English instruction in PBL settings has yielded meaningful findings from the data analysis. It is concluded that, although AI helps students handle large volumes of legal materials more efficiently, learners may still encounter difficulties when adopting these tools, such as information overload or uncertainty about how to employ AI suggestions. Instructors should be aware of these issues to provide timely guidance that prevents students from being adversely affected. Further work is also required to address aspects like overreliance on AI-driven feedback or potential losses in critical thinking. However, implementing a balanced approach that leverages both AI and student autonomy can be time-consuming and demands dedicated effort. Further investigations should focus on discovering strategies that build a learning environment which harmonizes AI-based recommendations with students' own analytical abilities.

Regarding pedagogical practice, specific guidelines on integrating AI applications should be disseminated so that learners become more adept at interpreting AI outputs in alignment with targeted legal skills. In addition, instructors must stay aware of whether students face challenges such as misusing AI-generated content or lacking the confidence to critique machine-produced suggestions. Teachers' insight can help alleviate potential confusion and maintain the depth of legal analysis. Similarly, a positive attitude toward collaborative use of AI needs to be fostered and sustained among students. The teacher, acting as a facilitator, should emphasize how learners' approach to AI influences their educational experiences, performance quality, and project outcomes. Consequently, students may become proactive in setting personal goals, continuously refining their legal English abilities through guided yet critical reliance on AI tools. Taken together, these findings suggest that teachers should actively guide how students engage with AI throughout the PBL process.

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**Ứng dụng trí tuệ nhân tạo trong phương pháp dạy học dựa trên dự án
với tiếng Anh pháp lý: phân tích định lượng về sinh viên ngành luật bậc đại học**

TÓM TẮT: Trong thập kỷ qua, việc tích hợp phương pháp dạy học dựa trên dự án (Project-Based Learning - PBL) với các công nghệ số đã thu hút sự quan tâm đáng kể trong các lĩnh vực tiếng Anh chuyên ngành, bao gồm cả tiếng Anh pháp lý. Bằng cách đưa người học vào các nhiệm vụ thực tế, kết nối giữa lý thuyết và thực hành, PBL giúp nâng cao sự tham gia tích cực và phát triển kỹ năng của người học. Nghiên cứu này xem xét cách trí tuệ nhân tạo (AI) có thể được áp dụng trong từng giai đoạn của PBL nhằm tăng cường kiến thức pháp lý và năng lực ngôn ngữ của sinh viên. Khảo sát định lượng này được thực hiện với 295 sinh viên đang tham gia môn tiếng Anh pháp lý theo định hướng PBL tại hai cơ sở đào tạo đại học, trong đó sử dụng thang đo Likert 5 bậc để đo lường nhận thức của sinh viên về việc sử dụng AI đối với phương pháp này. Phân tích dữ liệu thông qua SPSS 30.0 cho thấy rằng sinh viên đánh giá các công cụ hỗ trợ từ AI đặc biệt hữu ích trong cả sáu giai đoạn của PBL, bao gồm: Xác định dự án, Phát triển kế hoạch, Khám phá hoạt động, Sản xuất sản phẩm, Trao đổi kết quả và Đánh giá hoạt động. Kết quả nhấn mạnh sự cần thiết của việc hợp tác giữa con người và AI, cùng với các phản hồi phản ánh liên tục, gợi ý rằng AI phát huy hiệu quả tốt nhất khi được kết hợp với sự tham gia tích cực của người học.

TỪ KHOÁ: trí tuệ nhân tạo; sự tham gia lấy người học làm trung tâm; tiếng Anh pháp lý; phương pháp dạy học dựa trên dự án.