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Integrating Artificial Intelligence to Support Students' Independent Learning in Flipped Law Courses

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Abstract

This qualitative study investigates the integration of Artificial Intelligence (AI) to support students' independent learning within a flipped classroom (FC) pedagogy. The main challenge of FC has been students' insufficient preparation for classroom activities. To address the challenge the Essentials of Business Law course was implemented with FC pedagogy, granting students unrestricted access to AI tools. The study aimed to understand how students apply AI for learning and what are the challenges and potential future applications. An online survey was conducted to gather students' experiences on the implementation. The findings revealed that AI facilitated quick information access, enhanced learning efficiency, and provided personalized assistance, thereby improving students' independent learning during the first-year FC course. While supporting previous research the results highlight a tension between the risk of giving away critical reflection and necessarily learning it when using AI tools. To address this tension, it is recommended to carefully design learning tasks. Additionally, students' perspectives suggest that using AI in legal matters would benefit from teacher-designed demonstrative use cases included in the learning materials.

Introduction

The integration of Artificial intelligence (AI) in education is a rapidly emerging field (Bearman et al., 2023; Lim et al., 2023), while the flipped classroom (FC) pedagogy has become mainstream in Higher Education (HE) (Lo & Hew, 2017; O'Flaherty & Phillips, 2015). In FC pedagogy, students study independently in advance with online learning materials and classroom time is dedicated to reinforcing learning through in-depth learning tasks (Masland & Gizdarska, 2018; Abeysekera & Dawson, 2015; Hung, 2015; Kim et al., 2014; Bergmann & Sams, 2012; Lage et al., 2000). Previous research has demonstrated numerous positive effects of FC on learning, notably in enhancing student engagement, metacognition, performance, and comprehension (Al-Samarraie et al., 2020). However, the main challenge of this pedagogy has been students' insufficient preparation for classroom activities (Akçayır & Akçayır, 2018). Students may struggle with the amount of independent work required for pre-class work (Lo & Hew, 2017) or they might be unfamiliar with FC pedagogy (Munir et al., 2017). Independent work on pre-class material demands motivation and self-direction, which some students may lack (Isomöttönen & Tirronen, 2016). Active teacher communication and a coaching approach in teaching have been a way to support the success of students' independent learning (Hyttinen & Suhonen, 2022), but limited teacher time makes it

challenging to offer personal support to all students in large groups.

The flipped classroom has proven to be an effective pedagogy for promoting learning in higher education law courses (Hyttinen & Suhonen, 2022). Additionally, AI is recognized for its support in learning, such as tutoring and personalizing (Niemi et al., 2023). However, the use of artificial intelligence to support students' independent learning within flipped classroom pedagogy, particularly in law courses, has not been widely studied (Hyttinen, 2024). This qualitative study addresses this gap by exploring students' use of AI tools during the Essentials of Business Law course. Previous implementations of the course have shown that inadequate preparation for classroom lessons can negatively impact students' learning, potentially leading to course dropout. In this current implementation, students are allowed to use AI tools at their discretion to support their learning and preparation for the classroom. Based on students' experiences gathered through an online survey this study aims to discover how students use AI to aid learning, identify the challenges they face and what are the potential applications to improve pedagogical practices in future law courses. The findings provide insights into the student's experiences using AI as a learning tool in legal education. Overall, this study contributes to the advancement of flipped classroom pedagogy in legal education by offering actionable recommendations for AI-empowered learning.

Background Literature

Educators are constantly exploring how AI technologies can enhance teaching and learning in the classroom. A significant focus in research has been the use of Generative AI applications such as ChatGPT for learning. Artificial intelligence is described as "the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings" (Copeland, 2024). Generative AI is defined as a technology that leverages deep learning models to generate human-like content in response to complex and varied prompts (Lim et al., 2023). According to Chen et al. (2020), AI has been implemented in educational institutions in a variety of ways, including the automation of administrative operations, curriculum and content development, instruction, and student learning processes. A recent review presents that generative AI enhances students' academic performance and improves higher-order thinking capabilities (Deng et al., 2025). However, AI also raises concerns about academic integrity, plagiarism detection, and its impact on critical thinking skills (Hutson, 2024; Essien et al., 2024; Uzun, 2023; Perkins, 2023; Sullivan et al., 2023). Michel-Villarreal et al. (2023) stress the need for clear guidelines and procedures to responsibly integrate AI into higher education. Key challenges include the generation of false content by AI and the handling of students' personal data (Wang et al., 2023). The European Parliament (2023) recommends that AI systems should be safe, transparent, and human-supervised. Below, we review the adoption of AI in legal courses and flipped classroom pedagogy--the two aspects relevant to the present study.

AI in Legal Courses

Johnson and Shen (2021) identified an urgent need for law schools to prepare courses that incorporate AI, observing that less than a third of the schools in their US corpus had done so. Their review raised similar concerns as was cited above, such as ethics. Ma and Hou (2021) similarly stressed the need for professionals capable of

legal thinking and using AI. They acknowledged the development of personalized training models that can consider the characteristics and needs of students. The ability to efficiently apply AI coupled with excellent legal literacy was seen as a key educational goal whereas tasks such as simple document production were foreseen to be replaced by AI. Lewis (2024) acknowledged the increasing societal complexity in which law is practiced and noted that incorporating AI is necessary to meet the employer expectations of law students. He reviewed which skills could be replaced or augmented by AI and demonstrated the applicability of AI by mapping core lawyering course topics and available AI tools. These cited studies all demonstrate a view of the necessity of integrating AI into legal education.

There are several case examples of AI in legal courses. Alimardani (2024) compared students' and AI-generated answers to exam questions and noticed that AI could perform better in short open-ended questions and essay answers while being deficient in providing detailed critical analysis as the problem complexity increased. A key conclusion was the promotion of critical reflection among students, as this would prepare them for collaborating with AI tools and for using the outcomes of AI. Alimardani concluded that there is currently no risk of humans being placed while recognizing an advantage for those who can use AI tools. Farber (2024), providing a critique of traditional lecture-based legal education due to lacking attention to technological advancements, used AI in several ways in a criminal law course. These included AI-generated multiple-choice questions and case studies. The utilization of AI improved the course in comparison to the previous format regarding ease of use, engagement and participation, and improvement in understanding. Farber advocated a balanced approach in which human judgement is not replaced but elevated by AI. Al-Billeh (2024) reported good experiences across a wide range of aspects (e.g., individual, interactive, and interesting learning experiences, promotion of teamwork, and safe learning environment) when utilizing educational robots with which students interacted for legal information. Also, Al-Billeh noted the attention needed for critical reflection. These recent case studies demonstrate the advocation of AI in teaching while noting the balance needed between the value of AI and the value of human reflective skills.

AI in a Flipped Classroom

Legal courses with both flipped pedagogy and AI were yet difficult to find. For this reason, we raise examples without a disciplinary focus. Diwanji et al. (2018) saw the use of AI as beneficial for students' classroom preparation with flipped pedagogy in the business school context and proposed a design that would use chatbots and support intrinsic motivation. Montuori et al. (2020) cited AI in the sense of automatic assessment and exercise suggestions in the flipped classroom procedure and concluded enhanced feedback for students and reduced workload for teachers. Their case example was an energy markets course. In a language learning context, Li and Peng (2022) did not observe a direct influence on learning outcomes but observed improvement in attitude, including interest, autonomy and involvement, when AI provided performance feedback and exercise recommendations. The authors also reported a boost in students' confidence. Huang et al. (2023) found that students of systems programming courses with moderate motivation improved their learning outcomes and engagement when AI-based personalized video suggestions were used. With first-year medical students, Sanchez-Conzalez and Terrell (2023) compared traditional lecturing material and AI-enhanced material that added

customized conversations per student and observed better learning outcomes and efficiency in the AI group. Dan et al. (2023) concluded from their brief literature review that AI can have a positive impact on student learning with the flipped pedagogy, contributing to personalized learning, feedback and support, and interactions. Also, López-Villanueva et al. (2024) and Ray and Sidkar (2024) reported improved personalized learning and engagement. The former study was based on interviewing experts in flipped classroom pedagogy and the latter was based on the examination of the literature.

The above studies highlight the benefits for student learning, while also noting (e.g., Dan et al. 2023; López-Villanueva et al. 2024; Ray and Sidkar 2024) the need for the development of teachers' competencies and pedagogies with emerging technology. Other critical considerations appeared to be related to aspects such as privacy and equity, the topics quite typically discussed in the context of AI and education.

Methodology

Research Design and Research Questions

This qualitative research aimed to explore students' experiences with using AI applications in higher education law courses. The study involved the implementation of a law course with students' unrestricted use of AI applications for learning. Students were not otherwise guided or instructed but encouraged to use AI for learning. The purpose was to reveal how students are currently using AI tools for learning and what are the associated challenges. The aim was also to identify possible considerations for the future implementation of law courses.

The following research questions were set for the study:

1) How does AI aid students' learning in studying law?
2) What are the main challenges faced using AI tools?
3) What are the considerations for the future use of AI tools?

Research Context and Participants

A higher education institution in Finland offers the Essentials of Business Law (4 ECTS) course. The course is a bachelor-level compulsory course in the business studies curriculum. The content of the course includes four topics relevant to business students: 1) Legal system and legal information sources 2) Company and contract law 3) Commercial, consumer and marketing regulations and 4) Labor law and data protection. The students in the course were first-year international bachelor-level business students. Students in the international study program come from several countries and continents including Europe, Africa, and Asia. The course had 66 registered students and was implemented in the spring semester of 2024 lasting for the whole semester.

The Implemented Pedagogy

The course was arranged using the flipped classroom pedagogy. Students studied independently with the online materials before face-to-face classroom lessons. The online learning materials included instructional learning

videos, lecture materials and learning tasks. Each week classroom lessons were used to apply learning from online materials to learning assignments. The learning assignments included, among others, fictional legal cases, which students solved independently and in small groups. The students presented their cases, and the answers were discussed in the classroom to ensure learning. In addition, students kept a learning diary throughout the course, which is an effective way to support learning with FC in law studies (Hyttinen & Suhonen, 2022). Students were permitted to use AI tools for learning throughout the course, except during the final exam.

Data Collection and Analysis

The survey data was collected through an online survey, which was conducted using Webrobol online survey software, which enabled data collection without gathering identifying information. The survey comprised eight open-ended questions regarding the use of artificial intelligence during the course. The survey was administered at the end of the course and remained open for one week. Students' responses were then transferred from Webrobol to Microsoft Word for analysis. Out of 66 students, 29 (44%) responded to the survey. The following survey questions were used:

1. What AI applications did you use on the course?
2. For what purposes did you use AI applications in the course?
3. How do you think AI applications answered the law issues of the course?
4. How do you think the AI applications you used on the course affected your learning?
5. What were the main benefits of using AI applications for your learning in the course?
6. What kind of development ideas would you have regarding the use of AI applications in law courses?
7. How would you compare learning in courses that allow the use of AI applications to courses that do not?
8. Anything else that you want to share about using AI in the course?

The data analysis employed thematic analysis to examine students' responses, aiming to identify and interpret the meanings within the data (Braun & Clarke, 2006). Initially, all responses were compiled into a single document and reviewed multiple times to gain a comprehensive understanding of the data. Inductive coding was utilized, meaning that codes were generated organically during the data review process (Braun & Clarke, 2012, pp. 58-59). This approach facilitated the identification of initial codes, which were grouped into twenty separate categories. These categories were subsequently refined and consolidated into six overarching themes. The frequency of each code was recorded to quantify the prevalence of specific themes and categories. A detailed presentation of these themes is provided in the findings section.

Research Ethics

The research ethical guidelines were followed in the research (TENK, 2023). The participants were informed that the survey did not collect identifying information and responding was entirely voluntary. The identity of the participants was not disclosed at any stage of the study or in reporting. The participants were informed about the research and its purpose at the beginning of the course and before completing the survey. The participants were encouraged to answer honestly and openly to the survey questions.

Findings

Six themes were developed from the student's responses to the online query. The themes were 1) Access to information, 2) Learning efficiency, 3) Personalized learning support, 4) Accuracy and reliability of information, 5) Learning deficiencies and 6) Preparation for future legal work. Table 1 illustrates the themes, corresponding categories, code frequency, and representative examples of students' responses.

Table 1. Thematic Framework

Theme	Category (Code frequency)	Examples of students' answer
Access to information	Find information (34)	"The main benefit was that I could search for the necessary information quickly."
	Access to relevant information (15)	"I used it to research valuable information."
	Assist legal information search (7)	"I used this AI for finding general guidance about the Act/Law."
Learning efficiency	Enhance the understanding of the topic (29)	"Get some basic answers about the law and understand legal terminology."
	Provide an opportunity to brainstorm (8)	"Collect and gather the data and brainstorm on a topic we are focusing on."
	Enhance problem-solving (6)	"In this course, ChatGPT helped me a lot, especially in the analysis of problems, and gave comprehensive and perfect answers to make up for the loopholes in my thinking."
	Enhance comparing and analyzing knowledge (4)	"To compare and enhance the knowledge of the topic."
	Enables fast clarification of topics (9)	"At least we can get an idea about the topic in a short time in a brief way."
Personalized Learning support	Individual assistance and personalized support (23)	"The AI applications used in the course enhanced my learning by providing personalized assistance, instant feedback, and access to a wealth of resources, ultimately improving my understanding and retention of course material."
	Guide in difficulties (8)	"When I find I have no idea how to solve a problem or come across a new concept, I will use artificial intelligence. Or when I find that I can't find detailed information about a problem in a search engine, I use artificial intelligence."

Theme	Category (Code frequency)	Examples of students' answer
	Verification of learning (6)	"To check my answers and sometimes to get information for the given tasks."
	Immediate feedback on questions (4)	"It is equivalent to my personal tutor in law class, which enables me to get answers immediately and establish knowledge structure."
Accuracy and reliability of information	Information is wrong or misleading (17)	"Their answers were not precise enough and not always completely correct."
	Information is not accurate (9)	"Most of the time, I think the AI answers are relatively specific and comprehensive, but the AI answers are often not accurate enough to the key points of the question, or the case cannot be accurately analyzed."
	Information validity must be guaranteed (10)	"I personally think AI's answer is very generic, without reference to Law."
Learning deficiencies	Decrease the critical thinking ability (4)	"I think although the use of AI tools is more convenient and easy to use but in the long-run it will decrease the critical thinking ability of students."
	Possibility to cheating (5)	"I would have rather learnt without AI as I believe it's cheating of sorts, but then again it is the future and it's good that we train with it."
Preparation for future legal work	Prepare for the legal profession (4)	"Using AI in law classes can help students do better research and learn about predicting case outcomes. Also, teaching them to use software for making legal documents prepares them for real work in law."
	Instruct to use the AI for legal purposes (7)	"Equip students to use AI technology to solve complicated legal issues."
	Provide authentic examples and cases for better understanding (4)	"Interactive case studies using AI-powered simulations. AI-driven virtual legal research assistants for students. Adaptive learning platforms using AI to personalize study plans."

Access to Information

Students reported in their answers that the predominant AI application they used in the course was ChatGPT. Other AI applications mentioned to a lesser extent included Google Gemini and Microsoft Copilot. Students explained that AI improves the availability and access to information. They used AI to find more information about the topic and resolve the learning assignments. The ability of AI tools to direct students to the right sources of information was highlighted in the responses. They presented that AI provided additional knowledge to the

course material and enabled them to find the information quickly. In particular, the quick and easy way of retrieving information was highlighted in responses. Students described for example: "*To get the information quickly*" and "*To find information and help with instructions and assignments*" when they were asked to describe the purposes they used AI applications. Students also felt that access to relevant information is essential to gain new knowledge in legal courses. The easy access to information enabled them to get a quick overview of the legal issue. They felt they would fail to gather useful information about the topic if restricted only to the course materials. For instance, one student responded "*I think it will be a lot harder without AI. We would need to give more time and effort in finding information.*"

Learning Efficiency

One emerging theme concerned the efficiency of learning. Students felt that using AI tools makes learning efficient by providing information simple and understandable for them. Students reported that AI helped them to understand more about the subject and the legal terminology. As one student described "*To broaden my knowledge on topics and a better understanding*" was their purpose of using AI. Students utilized AI to discover the course topics and finish the learning assignments faster and more comprehensively. With AI they brainstormed different ideas and analyzed their answers in the learning assignments. One of the reported strengths of AI was the ability to clarify the topics. For instance, students requested AI to give practical examples of the given topic, provide new ideas, organize the key contents, and summarize the course material. Students felt that AI promoted their overall problem-solving process. As one student expressed this: "*In this course, ChatGPT helped me a lot, especially in the analysis of problems, and gave comprehensive and perfect answers to make up for the loopholes in my thinking*."

Students mentioned also that AI saved their time on relevant issues and led to an experience of less workload. AI gave an idea of the topic quickly and saved students time from searching and filtering the information on the Internet and search engines. As one student expressed in their answer: *"AI can quickly help me search out relevant information, saving the time of filtering information on search engines. Secondly, it can provide me with ideas and methods to solve problems. At the same time, it can help me organize the key contents in an orderly manner and learn knowledge more intuitively and concretely."*

Personalized Learning Support

One of the themes that emerged from the students' responses was the ability of AI to offer personalized support for their learning. Students found that AI can be beneficial especially when learning independently with online learning materials and course assignments. They explained that detailed instructions are emphasized when working independently to avoid becoming frustrated and AI enhanced their independent learning while they could obtain a deeper understanding of the new inquired information. To this matter one student wrote that using AI "*is very easy, effective and it enables self-education*." (Student 24) and another student explained that *"Compared with the traditional teaching model, the use of AI can be more adapted to the own learning pace. It can also stimulate my awareness of independent learning. After class, I think AI is a tool to help self-study and make*

learning more efficient. At the same time, the use of AI can help me have a deeper understanding of the new knowledge." (Student 15).

Many students expressed that AI provides individual assistance and personalized support to manage learning difficulties and solve learning problems. AI acted as a "*personal tutor*" for students assisting in addressing legal issues and allowing them to check and compare their answers. AI enabled immediate feedback on students' questions, and they could get instant clarification for any uncertain issues. Example of three students' experiences on this issue:

> Student 1: *"It is equivalent to my personal tutor in law class, which enables me to get answers immediately and establish knowledge structure…"*
>
> Student 2: *"If I didn't understand something, I asked to rephrase it to make it easier to understand and also give examples."*
>
> Student 8: *"The AI applications used in the course enhanced my learning by providing personalized assistance, instant feedback, and access to a wealth of resources, ultimately improving my understanding and retention of course material."*

Students also described that when it is difficult to get started with new legal cases AI supports learning by providing fundamental information for starting steps. They also reported that AI supported learning by assisting with the learning tasks supplementing the omitted part of the answers and allowing learning verification by checking their answers for accuracy and comparing their responses to AI's.

Accuracy and Reliability of Information

When asked about the challenges many students expressed their concerns about the accuracy and reliability of AI-generated responses. Students described that the AI-given "*answers were not precise enough and not always completely correct."* They noted that AI sometimes provided incorrect or incomplete information. Students felt that the AI-given information is not always reliable. The information needs to be ensured from valid legal sources as the AI doesn't give the right legal references with the answer. One student simply expressed this concern: "[AI-given information is] *very comprehensive, but needs to be verified for accuracy*." The answers of AI applications to legal cases were expressed to be too generic and information needed to be compared with valid legal sources. AI could also misinterpret legal information, as one student stated: "*It is impossible to expect AI to solve real cases*". Students suggested that legal courses should not be completely dependent on AI and directly pointed out that they do not fully trust the information provided by AI on legal matters.

> Student 17: *"I think despite our course materials and links provided enough data for us, I got much additional knowledge as well in using AI. But we can't trust blindly about all the details which AI provide. We can get an idea and get some knowledge additionally what we need."*

Student 19: *"Finding information was easier but I don't quite trust the information that the AI provided."*

Learning Deficiencies

Students mentioned the risk of becoming overly dependent on AI in the courses. They noticed that the use of AI requires self-discipline to concentrate on learning and it may decrease their critical thinking skills. Some students admitted that the convenience of AI sometimes made them lazy in accumulating knowledge independently which led to a limited understanding of the subject. They acknowledged that relying on the answers without paying attention to the thinking process leads them to learn less. AI applications should be used for learning, not for cheating or getting easy at the course. As one student expressed this: *"I would have rather learnt without AI as I believe it's cheating of sorts, but then again it is the future and it's good that we train with it."* Students realized that they should not copy and paste AI-given ideas but provide their own with the information gained. They mentioned that AI is an inevitable development in education, and it should not be used to get answers directly, but as a "*friend*" to help understand the knowledge. Five students' comments concerning the learning deficiencies of using AI in the course:

Student 1: "*Courses that allow the use of ChatGPT require more self-discipline for students to learn and courses that do not use AI will actually be used by students. This is an inevitable development, but I think ChatGPT might be better treated not as a tool to get answers directly, but as a friend to help us learn to understand knowledge.*"

Student 12: "*AI allows searching for different information quickly, but I would say that we start to think less at some moments and use AI to generate topics to think about.*"

Student 18: "*I think although the use of AI tools is more convenient and easy to use, but in the long-run, it will decrease the critical thinking ability of students.*"

Student 23: "*I think it is better because sometimes comparing the answers shows us the reality of the AI answers, and we can learn how to learn these tools for improvement instead of cheating!*"

Student 17: "*... for some of the courses we have to use and get ideas through AI tools what we need to know and be aware. But we should not copy and paste its idea. We can get its idea and can be aware. Then we have to provide our own ideas to get to know the topic.*"

Preparation for Future Legal Work

Students highlighted in their responses that by integrating AI into courses, they can be better prepared for the technology-driven landscape of the legal profession. The exposure to AI tools was felt to equip them with valuable skills and knowledge needed to succeed in a rapidly evolving digital world. They realized that the use of AI should be integrated into the curriculum, and they should be taught how to use AI applications for legal purposes to

prepare them for real work in law. They noticed that If AI tools are not used in legal courses' they get less exposure to emerging trends and technologies in the field of law. Two students described the importance of AI tools in preparation for future legal work. "*The use of AI applications in Law courses can improve their curricula to offer students more engaging, tailored, and efficient learning opportunities, better equipping them for success in the field of law.*" (Student 27). "*Enrich law courses, equip students with practical skills, and prepare them for the technology-driven landscape of the legal profession.*" (Student 28).

Students highlighted also practical uses of AI in future law courses that prepare them for practicing law. Students suggested that they should be instructed on training AI with legal documentation, utilizing it to draft legal documents, resolving complex legal issues, and conducting legal information searches. They proposed to teach them how to use AI for legal research and analysis. For future courses, they wanted AI-driven tutoring systems that offer personalized guidance and feedback on their learning progress—preparing them for the demands of the future workforce. Students also wanted to experience interactive case studies using AI-powered simulations and more authentic examples and cases for a better understanding of the legal topics. Here are four students' reflections on future needs:

> Student 8: "*Interactive case studies using AI-powered simulations. AI-driven virtual legal research assistants for students. Adaptive learning platforms using AI to personalize study plans.*"
>
> Student 10: "*Using AI in law classes can help students do better research and learn about predicting case outcomes. Also, teaching them to use software for making legal documents prepares them for real work in law.*"
>
> Student 11: "*AI-driven tutoring systems that offer personalized guidance and feedback based on students' progress…*"
>
> Student 22: "*Teach how you can train AI based on legal documentation, that is, using libraries or filling data libraries.*"

Discussion

In this section, we present and discuss the main findings in relation to the research questions. Table 2 summarizes the main findings on RQs.

Table 2. The Research Questions and the Main Findings

RQs	Findings
1. How does AI aid students' learning in studying law?	1. AI enables fast access to information, improving information availability. 2. AI assists in legal information searches pointing out the right legal sources. 3. AI enhances understanding and problem-solving by providing opportunities to brainstorm and to compare and analyze knowledge on the topic.

RQs	Findings
	4. AI supports learning enabling the clarification of topics and providing individual assistance with learning difficulties and learning tasks. 5. AI enables the verification of learning and provides immediate feedback on students' questions related to the subject and learning tasks.
2. What are the main challenges faced using AI tools?	6. AI-provided information is not accurate enough and the validity of the information must be guaranteed from the right legal sources. 7. AI-given information is not always reliable and sometimes AI gives wrong or misleading information. 8. AI provides generic answers without reliable law references which are not conducive to learning. 9. Using AI tools may lead to a decrease in students' critical thinking if the AI-given answers are not critically examined. 10. Using AI requires more self-discipline for students as it provides an easy possibility to cheat in learning.
3. What are the considerations for the future use of AI tools?	11. Students should be instructed when and how to use AI tools for legal purposes to prepare them for future legal professions. 12. AI should be used to provide: 1) authentic examples and interactive cases for better understanding and 2) a virtual assistant that offers personalized guidance on learning and legal research.

How AI Aided Students' Learning

The main findings of this study reveal that AI tools facilitate learning by making course topics more understandable and offering personalized support for learning challenges. Students could ask for clarification on legal topics and the AI-provided answers made the content easier to understand. Students used AI to solve legal problems in the learning tasks. They used it to brainstorm and analyze their knowledge of legal cases. They compared their answers to the answers provided by AI which enabled them to verify their knowledge and deepen their understanding of the legal issues.

Guiding students with independent studying is important as teachers' resources are often limited. AI tools enabled fast access to relevant information, improving the information availability. The AI tools made it easier to find the right legal sources, and students could ask the AI which laws, for example, regulate a particular case. The AI pointed out the right act and students had immediate access to the right source of law to start with. Especially the performance of weaker students in the course can benefit greatly from the support of AI tools. Students can ask AI for guidance if they are stuck on a legal task and no matter what state the students are with the task, it can advise them how to proceed. Instead of giving up and ceasing to learn students could finish the learning tasks.

Considering these outcomes in our context, we anticipate that AI could play an important role in influencing students' progress during their first-year courses, as the transition to university is known to involve challenges

related to the required level of independence (Leese, 2010). Notably, the amount of pre-class work and help-seeking during independent study is known to challenge students with the flipped classroom pedagogy (Lo & Hew, 2017). Furthermore, AI was referred to as a '*friend*,' and '*personal tutor*,' an intriguing perspective that aligns with the literature discussing potential experiences of collaborative learning with AI (Adiguzel et al., 2023).

The Main Challenges of Using AI for Learning

The main challenges of using AI were the validity and accuracy of the information, decreased critical thinking skills and the possibility of cheating in learning. Students recognized that they might become too lazy to do anything because AI provides a comprehensive answer to learning tasks. Using AI requires more self-discipline for students to concentrate on learning. This is a critical challenge for the teacher to address in the future in legal studies. Since the use of AI is an inevitable trend in education the teaching and learning tasks should be designed so that the use of AI enhances critical thinking, not detracts from it. In light of the literature emphasizing the need for human critical reflection alongside AI in legal matters (e.g., Alimardani, 2024), our students thus expressed concerns about the risk of abandoning reflection. While AI arguably supports self-regulated learning by providing personalized and immediate support, some form of self-regulation, such as willpower (Baumeister, Schmeichel, & Vohs, 2007), appears to be now needed to counteract the risk of neglecting reflection.

The students' opinions revealed their criticism toward the answers provided by AI. Students used the AI to gain more information on the topic and guidance on the learning tasks. In law courses, the focus is on teaching how to apply the existing regulations to a specific real-world case and the correctness of information is very important as the application of incorrect information leads to misinterpretations in legal cases. The learning tasks were always reviewed with the teacher, allowing students to verify the accuracy of their AI-assisted answers. When reviewing the learning tasks students noticed that the legal information provided by AI was not accurate, and they had to use reliable legal sources to ensure the information's authenticity. They also realized that sometimes the AI gave totally wrong or misleading information, the answers were too general, or the AI did not fully understand the nuances of legal concepts and cases. Students could understand AI as a tool to support learning and not a tool which always gives the right answer to legal issues. This leads us to reflect that, regardless of the above-stated risk of neglecting reflection, the use of AI prompts critical reflection about information, which is a useful working life skill.

Considerations for Future Use of AI

For future legal courses, the suggestion is to teach students how to use AI tools for legal purposes to better prepare students for working life. Students should be instructed on when and how to use AI tools effectively for legal purposes. For example, students should be taught how to teach AI with legal data and to brainstorm with it. They should be taught how to use AI to draft legal documents and to help solve legal cases. AI should be used to provide authentic examples and interactive case studies for a better understanding of legal topics. For learning support, AI should be used to provide personal assistance that guides students on learning difficulties.

Research Limitations

The limitations of this research include the reliance on data from a single course, which may not be generalizable to other contexts or disciplines. The utilization of multiple research methods, such as conducting interviews with students after the survey, could have provided even more in-depth insights for the analysis. On the other hand, having more than one researcher involved in interpreting and writing the results increases the reliability of the analysis. Data analyzed from 29 student responses offers focused insights and contributes to an overall understanding of the use of AI in the current course.

Conclusion and Recommendations

This study explored the integration of AI in a law course, revealing that AI tools like ChatGPT significantly enhanced information access and learning efficiency. AI served as a personal tutor, providing individualized assistance and immediate feedback offering the possibility for scaffolded learning experiences. The use of AI clearly supports independent learning within the context of FC pedagogy. When students receive immediate and effective assistance and feedback, they can progress in the course and prepare for F2F meetings. We hence recommend the use of AI with flipped classroom pedagogy to support independent studying during critical first-year courses.

The results also confirm a tension related to students' critical reflection. On one hand, students highlight the temptation to abandon critical self-thinking, while on the other hand, their attitude towards AI-provided answers suggests that the use of AI requires increased critical thinking. It is recommended that teaching and learning tasks should be designed so that students are required to and learn to value critical reflection while also learning to utilize AI from a professional perspective.

Looking towards the future, students appeared to consider the utilization of AI as an essential professional skill. Additionally, the responses suggest that teaching could address various use cases of AI within the context of practicing law. The recommendation is to plan teaching accordingly. This includes providing training on how to find and apply relevant information for legal purposes and promoting the use of AI-given information to acquire a deeper understanding beyond surface-level knowledge. Overall, the students clearly suggested that the use of AI should be integrated into the legal studies curriculum and teaching should focus on developing practical skills through AI applications, such as legal research, document analysis, and case prediction, to better prepare students for real-world legal practice.Finally, the detailed observation of students characterizing AI as a friend or personal tutor in our data warrants attention in future research. This research could focus on the use of AI as a form of collaborative learning, examining student's group work within the context of flipped classroom pedagogy.

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