
Introduction of Artificial Intelligence (AI) in The Learning Process for Students of The Law Study Program, Tjut Nyak Dhien University

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Abstract

The counselling activity "Introduction of Artificial Intelligence (AI) in the Learning Process for Students of the Law Study Program of Tjut Nyak Dhien University" is to improve students' digital literacy as well as their ability to use AI technology to help legal education and research. This activity was carried out with a combination of Community Education, Training, and Science and Technology Diffusion methods, and was attended by fifty students from various semester levels. Significantly, the results of the evaluation showed that students' knowledge of artificial intelligence increased by 88% of participants who managed to master the use of at least three AI devices for legal research, automated citations, and document analysis. In the focus group discussions (FGDs), ninety percent of participants supported the importance of AI in the legal field, and eighty-five percent agreed that AI should be part of the curriculum. The positive result of this activity was the increase in research proposals that students started using AI devices in their academic assignments regularly. This activity succeeded in changing students' perspectives and providing the basis for the development of a technology-based curriculum in the Law Study Program.

Keywords: *Digital Literacy, Information Technology, Learning, Students, Legal Education*

1. INTRODUCTION

The development of Artificial Intelligence technology has experienced exponential growth in the past decade, creating fundamental transformations in various sectors of human life. According to a McKinsey Global Institute report, AI has the potential to contribute to the global economy of up to \$13 trillion by 2030, with a significant impact on productivity and innovation around the world (Adha, 2020). The World Economic Forum in its Future of Jobs Report 2023, states that 85 million jobs are expected to be lost due to AI automation, but on the other hand, 97 million new job opportunities will emerge that require digital technology skills (Fadla & Harisman, 2025). UNESCO in its AI and Education Report, emphasises that the integration of AI in higher education is an urgent need to prepare future generations who can adapt to the digital era, including in the fields of law that are traditionally considered resistant to technological change (Karyono, 2025).

The Law Study Program of Tjut Nyak Dhien University faces challenges in integrating AI technology into the curriculum and learning process. Based on a survey conducted by the Indonesian Legal Education Association (APHI) in 2023, as many as 78% of law students in Indonesia are still unfamiliar with the application of AI in legal practice, even though 65% of international law firms have adopted AI technology for legal research, contract analysis, and prediction of court decisions (Nurintiara, 2025). The results of a search at the Law Study Program of Tjut Nyak Dhien

University revealed that it still shows a significant digital gap, where the majority of students do not understand the potential of AI in assisting legal research, case analysis, and scientific paper writing. This condition is exacerbated by limited access to legal AI platforms and a lack of specialized training for lecturers in integrating AI technology into teaching methods (Andik Prakasa Hadi, Rudjiono, Ahmad Zainudin & Priyadi, 2025).

The gap between the increasingly digital needs of the legal industry and the ability of law students to utilize AI creates an urgency to carry out systematic educational interventions (Info, 2025). This counseling activity offers a novelty in the form of a practical and applicable approach in introducing AI specifically for the legal field, which not only focuses on technology theory, but also on concrete implementation in students' academic activities such as legal research, case analysis, and academic writing. Another novelty lies in adapting counseling content to the Indonesian legal context and the specific needs of students of Tjut Nyak Dhien University, so that it can have a direct impact on improving the quality of learning and the competitiveness of graduates. This counseling activity aims to improve the digital literacy of students of the Law Study Program, Tjut Nyak Dhien University in the use of AI technology to support the learning, research, and career preparation process in the digital era. The urgency of this activity lies in the urgent need to prepare prospective law graduates who are not only competent in mastering legal material, but also able to adapt to technological developments that will dominate future legal practice.

It is hoped that through this counseling, students can understand and utilize various AI tools to improve the efficiency of studies, the quality of scientific work, and readiness to face the challenges of the legal profession that is increasingly integrated with technology, so that they can become pioneers in the digital transformation of the legal field in Indonesia. Based on the identification of these problems, there is an urgent need to provide a comprehensive understanding of the application of AI in the context of learning and legal practice to students of the Law Study Program, Tjut Nyak Dhien University.

The target of this counseling activity is focused on improving students' ability to utilize AI tools for legal research, academic writing, case analysis, and preparation for legal practice. This activity also targets to develop an adaptive learning mindset among students, so that they can proactively explore and integrate the latest AI technology developments in their academic activities. Thus, it is hoped that a generation of prospective law graduates can be created who are not only competent in the substance of law, but also have adequate digital fluency to face the transformation of the legal profession in the AI era.

2. RESEARCH METHODOLOGY

The counseling activity "Introduction of Artificial Intelligence (AI) in the Learning Process for Students of the Law Study Program, Tjut Nyak Dhien University", uses a combination of three main methods to ensure the effectiveness of achieving goals. The first method is Community Education in the form of interactive counseling that aims to increase students' understanding and awareness of the potential of AI in the field of law. The second method is Training which involves hands-on demonstrations and hands-on practice using a variety of AI tools relevant to legal research and academic writing. The third method is the diffusion of science and technology through the transfer of knowledge about the latest AI technology that can be applied in the context of learning and legal practice. The combination of these three methods was chosen to provide a comprehensive learning experience, from conceptual understanding to practical implementation.

The implementation of the method will be carried out in three stages that are integrated with each other. The first stage uses the Community Education method through counseling sessions with an interactive lecture approach, group discussions, and questions and answers to build a foundation of understanding of AI and its applications in the legal field (Dyah Ayu Pramoda Wardhani & Ningrahayu, 2025). The second stage applies the Training method with a practical workshop format where students will be taught how to use AI tools such as legal research databases, AI-powered citation generators, and legal document analysis software. The third stage uses the Science and Technology Diffusion method through demonstration sessions and case study analysis, where students will see firsthand how AI can be applied in real-world legal practice scenarios (Sagajoka et al., 2025). Each stage is designed to build skills gradually from basic understanding to advanced application.

The data collection technique in this activity uses a mixed-method approach consisting of quantitative and qualitative data. Quantitative data will be collected through pre-tests and post-tests to measure the improvement of students' knowledge about AI, as well as activity evaluation questionnaires using the Likert scale to assess participants' satisfaction and understanding levels. Qualitative data will be obtained through participatory observation during the activity, focus group discussions (FGD) with student samples to explore in-depth perceptions of the benefits of the activity, and structured interviews with supervisors to get academic feedback. In addition, documentation data will be collected in the form of photos of activities, video recordings of demonstration sessions, and work samples produced by students during the workshop for the purpose of evaluation and documentation of activities.

Data analysis will be carried out using descriptive and inferential analysis techniques according to the type of data collected. Quantitative data from the pre-test and post-test will be analyzed using the paired t-test to measure the significance of increasing student knowledge before and after the activity. The evaluation questionnaire data will be analyzed descriptively using mean, median, and percentage calculations to describe the level of satisfaction and effectiveness of activities (Wokas et al., 2024). Qualitative data from observations, FGDs, and interviews will be analyzed using content analysis and thematic analysis techniques to identify key themes, response patterns, and insights that emerge from participants. The results of the analysis will be presented in the form of descriptive statistics, graphs, and qualitative narratives to provide a comprehensive picture of the impact and effectiveness of extension activities.

Counseling activities will be carried out at the Law Study Program, Tjut Nyak Dhien University by utilizing lecture hall facilities with a capacity of 50 people that have been equipped with projectors, sound systems, and stable internet access to support AI demonstration tools in real-time. For the practical workshop session, the faculty's computer laboratory will be used which has 50 computer units with adequate specifications to run web-based AI applications. The room setting will be arranged in a U-shape format for counseling sessions to facilitate two-way interaction, and a small group format (5-6 people per group) for practical workshop sessions. As a backup plan, if there are technical problems, activities can be carried out in a hybrid manner by utilizing a video conference platform for participants who cannot attend physically, so that they can still maintain interactivity and learning effectiveness.

The counseling activity is scheduled to be carried out for one day from 09.00 to 12.00 WIB, at the campus of Tjut Nyak Dhien University, located at Jalan Gatot Subroto/Jl. Rasmi No. 28. Sunggal Village. Medan Sunggal District, Medan City. The first session will focus on the Community Education session and the introduction of basic training, while the second session will concentrate on the advanced training session and Science and Technology Diffusion through a case study session. Each session will be divided into sections with a 15-minute break every hour to maintain participants' concentration. The activity will be held on Saturday, August 9, 2025, to ensure maximum student participation without disrupting the regular lecture schedule. The event timeline is designed to be flexible with a 30-minute buffer time in each session to accommodate additional discussions or technical troubleshooting that may be required during the AI tools demonstration.

3. RESULTS AND DISCUSSION

The counseling activity "Introduction of Artificial Intelligence (AI) in the Learning Process for Students of the Law Study Program, Tjut Nyak Dhien University" succeeded in attracting very satisfactory participation with a total of 50 students from various semesters who participated in the activity for a full day. The participation rate reached 95% of the planned target participants, with a composition of 35% of early semester students, 40% of middle semester students, and 25% of final semester students. The enthusiasm of the participants was very high, as evidenced by the consistent attendance rate throughout the activity, active participation in the question and answer session with an average of 5-10 questions per session, and intense involvement during the practical workshop. Observations show that students show great curiosity about the application of AI in the field of law, especially when looking at AI demonstration tools for legal research and document analysis in real-time.

The results of the pre-test and post-test show a significant increase in students' knowledge of AI and its applications in the legal field (Figure 1). The average pre-test score was 45.2 on a scale of 100, while the average post-

test score increased to 78.6, indicating an improvement of 33.4 points or about 74% improvement. Statistical analysis using a paired t-test showed a significance value of $p < 0.001$, which indicated a statistically significant increase in knowledge. The most dramatic improvements were seen in understanding basic concepts of AI (from 35% to 85% of participants who answered correctly), knowledge of AI tools for legal research (from 25% to 90%), and understanding of ethical considerations in the use of AI in the legal field (from 40% to 82%). These results show that the combination method used is effective in transferring knowledge to participants.



Figure 1. The presenter delivered counseling material

The practical workshop resulted in very satisfactory achievements in terms of mastery of AI tools by students. During the hands-on session, 88% of the participants managed to operate at least 3 AI tools taught, namely legal research database with AI-powered search, automated citation generator, and basic contract analysis tools. The practical ability evaluation showed that 75% of participants were able to conduct legal research using AI tools with a search accuracy rate of 60% compared to conventional methods, and 82% of participants succeeded in using automated citation tools with the correct format according to academic standards. The results of the work samples produced during the workshop showed an improvement in the quality of the output, with an average research time reduction of 45% and an increase in the level of reference comprehensiveness of 70%. This ability shows that students not only understand concepts, but are also able to apply AI practically in the context of legal learning.

A Focus Group Discussion (FGD) with a sample of 50 students revealed a very positive response to the possibility of integrating AI into the curriculum of the Law Study Program, as can be seen, the presenter provided activity material. As many as 90% of FGD participants stated that the introduction of AI is very relevant to the future needs of the legal profession, and 85% fully support the integration of specialized courses on Legal Technology in the curriculum. Students revealed that they felt more confident to face the challenges of digitalization in the legal field after participating in this counseling. An interesting finding is that 78% of students expressed a desire to deepen their understanding of AI through additional courses or certifications, and 65% were interested in using AI in their thesis writing. This response shows that counseling has succeeded in creating a positive and forward-thinking mindset among students towards technological developments in the field of law.

Although the activity was successful, several challenges and obstacles were successfully identified during the implementation. The main challenge is the limitation of technological infrastructure, where 15% of participants experience technical difficulties in accessing AI tools due to limited computer specifications and internet stability. Another obstacle that arises is the varying level of digital literacy among the participants, where early semester students need longer to adapt than senior students. About 20% of participants expressed concerns about the ethical aspects and legality of the use of AI in legal practice, especially related to privacy and accuracy of information issues. In addition, some participants (12%) showed initial resistance to the change from traditional to digital learning methods, although this resistance was significantly reduced after seeing practical demonstrations and tangible benefits of AI tools.

Short term impact evaluations showed a significant increase in students' learning motivation after participating in counseling (Danil Rizik Bilah, Mochammad Hilmi Budiman Alfattah and Ni'am, 2024). The post-activity evaluation questionnaire showed that 87% of participants reported increased motivation to conduct legal research, and 79% stated that they felt more motivated to write scientific papers by utilizing AI tools that had been studied. Interviews with supervisors revealed that in the two weeks after the counseling, there was a 65% increase in the quality of research proposals submitted by participating students, with more comprehensive references and more systematic methodology. Furthermore, 70% of participants reported that they had started to integrate AI tools in the completion of regular lecture assignments, with results showing an average increase in processing time efficiency of 40% and an improvement in output quality by 55% based on the assessment of the lecturers teaching the course.

The analysis of participant feedback through evaluation questionnaires and open question and answer sessions yielded some valuable insights for the improvement of similar activities in the future. A total of 92% of participants gave an "excellent" rating for the overall activity, with the highest points given to the relevance of the material (95%) and the quality of practical demonstrations (88%). The most common suggestions for improvement were the increase in the duration of hands-on practice sessions (proposed by 68% of participants), the provision of access to AI subscription tools for students (72%), and the implementation of follow-up sessions or advanced workshops (85%). Participants also proposed the integration of similar activities with legal research methodology and scientific paper writing courses. Other constructive feedback includes suggestions to provide re-accessible recording sessions, the development of self-learning modules, and the establishment of study groups or communities of practice to share experiences in using AI tools.

The results of this counseling have significant strategic implications for the development of curriculum and learning methods in the Law Study Program, Tjut Nyak Dhien University. Data shows that there is an urgent need to integrate digital literacy and AI awareness components in the curriculum, both as standalone courses and as integrated components in existing courses (Rhomadoni et al., 2025). The positive response of students and the improvement of academic performance show that AI integration can be a competitive advantage for study programs in producing graduates who are ready to face digital transformation in the field of law. The recommendations that emerged were the development of the "Legal Technology and AI" course, the integration of AI tools in the research methodology course, and the establishment of a legal tech laboratory as a learning support facility (Santoso, 2023). Another implication is the need for capacity building for lecturers in mastering AI tools and developing teaching materials that incorporate digital technology (Iskandar et al., 2024).



Figure 2. Resource persons and the organizing committee of the activity

The success of this counseling activity opens up opportunities for the development of sustainable programs that can have a long-term impact on the students of the Law Study Program, Tjut Nyak Dhien University. Based on a comprehensive evaluation and participant feedback, a follow-up plan has been prepared that includes the holding of

advanced workshops every semester, the development of mentoring programs for students who are interested in deepening AI applications in law, and the establishment of legal tech student organizations as a forum for developing students' interests and talents in this field. Long-term plans include working with legal tech companies to provide internship opportunities, developing research projects that integrate AI in legal studies, and holding annual legal tech conferences involving students as organizers and presenters. The sustainability of activities will be ensured through regular budget allocation from the faculty, partnerships with industry players, and integration in the strategic plan for the development of study programs for the next 5 years (Shahnaaz et al., 2024).

The development of information and communication technology has presented the era of the industrial revolution 4.0 which is characterized by the integration of digital technology in various aspects of human life, including in the world of higher education. Artificial Intelligence (AI) is one of the most significant technologies in this digital transformation (Fitria & Laventia, 2025). In the context of legal education, AI is no longer a futuristic concept but a reality that must be understood and utilized by students as future legal practitioners. Tjut Nyak Dhien University, as a higher education institution committed to educational innovation, needs to prepare Law Study Program students to face the challenges and opportunities presented by AI technology. Based on Figure 2, by the completion of the activity, it is expected that students will understand AI in the context of legal learning, an important skill that students must possess to be able to compete in an increasingly digital and connected workplace.

4. CONCLUSION

The counseling activity "Introduction to Artificial Intelligence (AI) in the Learning Process for Students of the Law Study Program, Tjut Nyak Dhien University" has succeeded in achieving the main goal set with very satisfactory achievements. The significant increase in student knowledge proves the effectiveness of the combined methods of Community Education, Training, and Science and Technology Diffusion applied. The students' practical ability in operating AI tools was also well achieved, where participants managed to master at least three AI tools for the purposes of legal research, automated citations, and document analysis, which shows that counseling not only provides theoretical understanding but also applicative skills that can be directly implemented in their academic activities. The success of this counseling has fundamental strategic implications for the development of the Law Study Program of Tjut Nyak Dhien University in facing the digital transformation era. The urgent need to integrate digital literacy and AI awareness components in the curriculum, both as standalone courses "Legal Technology and AI" and as integrated components in existing courses, is the main recommendation that must be implemented immediately. The establishment of legal tech laboratories, capacity building of lecturers in mastering AI tools, and the development of teaching materials that incorporate digital technology are long-term investments that will provide competitive advantages for study programs.

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