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Students' Perceptions of Artificial Intelligence in Tax Learning

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Abstract

The use of Artificial Intelligence (AI) in higher education has increased rapidly, with many students using AI-based applications independently to support learning. In regulation-based subjects such as taxation, this practice raises concerns related to learning accuracy, relevance to local regulations, and ethical use. This study aims to examine students' perceptions of AI use in tax learning. A qualitative descriptive approach was employed involving undergraduate accounting and taxation students at the University of Lampung and the Lampung State Polytechnic who had taken taxation courses and used AI as a learning tool. Using purposive sampling, data were collected through an online questionnaire, resulting in 143 valid responses from an estimated eligible population of 809 students. The questionnaire included Likert-scale items and open-ended questions, with qualitative data analyzed using thematic analysis. The findings indicate that students perceive AI as a helpful learning support, particularly for understanding complex tax regulations, improving learning efficiency, and supporting independent study. However, concerns remain regarding information accuracy, limited relevance to Indonesian tax regulations, overreliance on AI, and academic integrity. This study concludes that AI can support tax learning when used as a complementary tool, supported by critical use and lecturer guidance.

Keywords: artificial intelligence; student perceptions; tax learning; higher education; qualitative research

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INTRODUCTION

1. Background

The development of Artificial Intelligence (AI) has become a central issue in the global transformation of higher education. Russell and Norvig [1] define Artificial Intelligence as the study of intelligent agents, namely systems that perceive their environment and take actions that maximize the achievement of their goals. In educational contexts, AI has increasingly been applied to support personalized learning, learning analytics, and automated feedback, enabling learning environments that are more adaptive to individual student needs [2], [3].

Empirical research consistently indicates that the use of AI in learning environments can positively influence student engagement and conceptual understanding. Studies on adaptive learning systems show that AI can dynamically adjust learning content, feedback, and pacing to support personalized learning experiences [2]. Large-scale systematic reviews further confirm that AI has strong potential to enhance learning quality in higher education, particularly through personalization and instructional efficiency [3], [4]. In addition, AI-based chatbots and conversational agents have been shown to improve student interaction, accessibility, and engagement in the learning process [5].

In practice, many university students have begun using generative AI applications independently as informal learning aids when dealing with complex course materials, a practice that has intensified concerns regarding learning accuracy, uncritical reliance on AI-generated outputs, and academic integrity.

Despite these benefits, recent studies also highlight challenges and risks associated with AI integration in education. Concerns related to information accuracy, algorithmic bias, uncritical reliance on AI-generated outputs, and threats to academic integrity are frequently reported, particularly in the context of generative AI [6]. Moreover, Zhai et al. [7] emphasize that the effectiveness of AI in education depends heavily on students' digital literacy and their ability to critically evaluate AI-generated information. These findings suggest that the pedagogical value of AI is highly

context-dependent and requires appropriate instructional guidance.

These issues are particularly salient in disciplines characterized by high technical complexity and strong regulatory orientation, such as taxation. Tax education involves intensive engagement with legal rules, frequent regulatory changes, and the application of abstract provisions to practical cases. As a result, taxation is widely recognized as a regulation-based subject that demands strong analytical skills and up-to-date knowledge [8]. From a broader educational policy perspective, disciplines with complex and evolving knowledge structures impose high cognitive demands on learners and may particularly benefit from appropriate digital learning support [9].

Several studies indicate that the integration of digital learning technologies can support students in coping with the complexity of accounting and taxation education. Apostolou et al. [10] report that technology-enhanced learning improves students' conceptual understanding and problem-solving abilities in accounting-related subjects. However, much of the existing literature focuses on general educational technologies or curriculum innovation, with limited attention to Artificial Intelligence specifically and even less emphasis on students' subjective perceptions of AI use in tax learning contexts.

Against this background, the rationale for this research lies in the intersection between the rapid adoption of AI in higher education and the distinctive pedagogical characteristics of tax education as a regulation-based and professionally oriented subject. Students' perceptions are critical because they influence technology acceptance, usage behavior, and learning effectiveness. Therefore, exploring students' perceptions of AI use in tax learning is essential to bridge the gap between technological innovation and pedagogical practice and to ensure that AI integration aligns with educational objectives and ethical standards. This study aims to explore students' perceptions of the use of Artificial Intelligence in tax learning, with particular attention to perceived benefits, challenges, learning motivation, and ethical considerations.

2. Literature Review

2.1 Artificial Intelligence in Education: Conceptual and Pedagogical Perspectives

Artificial Intelligence (AI) in education is broadly defined as the use of computational systems capable of performing tasks that typically require human cognitive abilities to support teaching and learning processes. Russell and Norvig [1] conceptualize AI as intelligent agents that perceive their environment and act rationally to achieve predefined goals. Within educational contexts, this perspective frames AI as an adaptive system that can respond to learner inputs and instructional objectives.

Rather than reiterating the general discussion presented in the Introduction, this section focuses on the pedagogical positioning of AI in higher education. Luckin et al. [2] argue that AI can support the orchestration of learning by aligning instructional content, feedback, and pacing with individual learner needs. Empirical and review-based evidence further suggests that AI-supported systems can enhance instructional effectiveness when integrated within sound pedagogical frameworks [3], [4]. From a pedagogical standpoint, AI is thus understood as a complementary support that enhances learner-centered instruction while preserving the central role of educators.

2.2 Empirical Research on AI-Supported Learning in Higher Education

Empirical research on AI-supported learning in higher education has grown rapidly over the past decade. Zawacki-Richter et al. [4], through a comprehensive systematic review, identify personalization, intelligent tutoring systems, learning analytics, and automated feedback as central research themes. Their findings indicate that AI contributes positively to learning efficiency and instructional quality, particularly in contexts characterized by diverse student populations and complex learning objectives.

More recent systematic reviews reinforce these conclusions. Labadze et al. [3] synthesize evidence from open-access studies on AI chatbots and report positive effects on conceptual understanding, learner autonomy, and accessibility to learning support. These findings are consistent with broader educational technology research suggesting that digital tools can facilitate active and self-directed learning when appropriately integrated into instructional design.

2.3 AI, Student Engagement, and Self-Regulated Learning

Student engagement and self-regulated learning are widely recognized as critical determinants of academic success in higher education. Engagement encompasses behavioral, cognitive, and emotional dimensions that influence students' persistence and learning depth. Building on the empirical findings outlined in the Introduction, this section synthesizes research that explains how AI-supported learning environments contribute to these dimensions.

Evidence synthesized by Labadze et al. [3] indicates that AI chatbots and adaptive systems encourage active

learning behaviors by enabling students to seek clarification and access explanations independently. Such affordances support self-regulated learning processes, including planning, monitoring, and reflection. However, Zhai et al. [7] caution that without sufficient digital literacy, increased engagement may result in surface learning or uncritical reliance on AI-generated information.

2.4 Ethical Challenges and Responsible Use of AI in Education

The expanding use of AI in education has intensified scholarly attention to ethical challenges and responsible use. Kasneci et al. [6] identify major risks associated with generative AI, including information inaccuracy, algorithmic bias, lack of transparency, and threats to academic integrity. These issues raise important questions regarding trust, accountability, and fairness in educational settings.

From a governance perspective, Karsenti [11] and Tlili et al. [12] emphasize the need for clear institutional policies and pedagogical frameworks to guide AI integration. Ethical AI use in education requires not only technical safeguards but also the development of students' ethical awareness and critical evaluation skills. These considerations are particularly relevant in disciplines where accuracy and professional responsibility are essential.

2.5 Tax Education as a Regulation-Based Learning Context

Tax education represents a distinctive learning context characterized by high technicality, strong reliance on legal interpretation, and frequent regulatory changes. James and Alley [8] describe taxation as a regulation-based discipline that demands analytical reasoning and continuous updating of knowledge. Such characteristics impose substantial cognitive demands on students, especially when abstract statutory provisions must be applied to practical cases.

Studies in accounting and taxation education suggest that technology-enhanced learning can help students manage this complexity. Apostolou et al. [10] report that digital learning tools support conceptual understanding and problem-solving by facilitating practice and case-based application. From a broader policy perspective, the OECD [9] highlights that digital learning support is particularly beneficial for disciplines characterized by complex, rule-based, and evolving knowledge structures. Nevertheless, AI-specific research within tax education remains limited.

2.6 Students' Perceptions of Educational Technology and Research Gap

Students' perceptions are a critical factor influencing the success of educational technology adoption, as they shape technology acceptance, usage behavior, and learning effectiveness. Davis's [13] Technology Acceptance Model posits that perceived usefulness and perceived ease of use strongly affect individuals' acceptance of new technologies. In the context of AI-supported learning, recent empirical and review-based studies emphasize that students' perceptions are also influenced by perceived learning support, trust in AI-generated outputs, and alignment with instructional objectives [3], [4].

Qualitative and mixed-method research in higher education further suggests that students tend to perceive AI-based learning tools positively when these tools provide clear explanations, adaptive feedback, and flexible access to learning resources [6], [12]. At the same time, concerns related to information accuracy, ethical use, and the risk of overreliance on AI have been consistently reported, particularly in assessment-oriented learning contexts where accuracy and accountability are essential [7].

Despite the growing body of research on AI in higher education, empirical studies that specifically examine students' perceptions of AI use in regulation-based and professionally oriented subjects remain limited. Existing research in accounting and taxation education has largely focused on curriculum development and general educational technologies rather than on AI-supported learning tools and students' subjective experiences [10]. Moreover, studies that explicitly explore how students perceive the benefits, challenges, and ethical implications of AI use in tax learning contexts are still scarce.

This study addresses this gap by providing qualitative evidence on students' perceptions of AI use in tax learning, with particular attention to perceived benefits, challenges, learning motivation, and ethical considerations. By focusing on taxation as a regulation-based discipline characterized by high technical complexity and frequent regulatory changes, this research contributes context-specific insights that extend existing AI-in-education literature and inform pedagogical practice and institutional policy development.

To clarify the position of this study within the existing body of research, Table 1 summarizes key differences between prior studies on AI in education and the focus of the present research.

Table 1. Summary of Previous Studies on AI in Education and Accounting/Tax Learning

Author(s) and Year	Research Context	Methodology	Main Findings
Zawacki-Richter et al. [4]	Higher education (various disciplines)	Systematic literature review	AI enhances personalization, instructional efficiency, and learning support, but empirical evidence remains fragmented across contexts.
Labadze et al. [3]	Higher education	Systematic literature review	AI chatbots support conceptual understanding, learner autonomy, and accessibility, while raising concerns about reliability and ethical use.
Chen et al. [5]	Higher education	Literature review	AI applications improve interaction and learning efficiency through intelligent tutoring and feedback systems.
Kasneci et al. [6]	Higher education	Conceptual and empirical synthesis	Generative AI offers educational opportunities but poses risks related to accuracy, bias, and academic integrity.
Zhai et al. [7]	Higher education	Critical review	AI can enhance engagement, but students require digital literacy to avoid uncritical reliance on AI outputs.
Apostolou et al. [10]	Accounting and taxation education	Literature review	Technology-enhanced learning improves conceptual understanding and problem-solving, but AI-specific applications are underexplored.

Following the synthesis of prior research presented in Table 1, it is evident that existing studies have predominantly examined AI applications in general higher education contexts or focused on digital learning innovations in accounting and taxation without explicitly addressing Artificial Intelligence. Moreover, limited attention has been given to students' subjective perceptions of AI use in regulation-based subjects such as taxation. Therefore, this study seeks to explore students' perceptions of AI use in tax learning, with particular attention to perceived benefits, challenges, learning motivation, and ethical considerations. By focusing on taxation as a discipline characterized by high technical complexity and frequent regulatory changes, this research aims to provide context-specific insights that complement and extend existing AI-in-education literature.

RESEARCH METHODOLOGY

1. Research Design and Data Collection

This study employed a qualitative descriptive research design to explore students' perceptions of the use of Artificial Intelligence (AI) in tax learning. A qualitative approach was considered appropriate because the research aims to capture students' subjective experiences, interpretations, and reflections regarding AI-supported learning rather than to test hypotheses or measure causal relationships.

The research population consisted of undergraduate students enrolled in accounting and taxation programs at the University of Lampung and the Lampung State Polytechnic who were currently taking or had previously completed at least one taxation-related course. Based on institutional student data as of October 2025 and considering that taxation courses are generally introduced from the third semester, the estimated population is presented in Table 2.

Table 2. Estimated Research Population

Institution	Total Enrolled Student	Total Eligible Student
Universitas of Lampung	779	540
Lampung State Polytechnic	404	269
Total Population	1.183	809

Given the qualitative and exploratory nature of the study, a non-probability purposive sampling technique was employed to ensure that respondents had direct experience using AI-based applications in tax learning. Data were collected through an online questionnaire distributed via course-related communication channels and lecturer-mediated announcements in taxation classes. A total of 143 valid questionnaires were analyzed.

The questionnaire included Likert-scale items and open-ended questions covering AI usage, perceived learning effectiveness, learning motivation, challenges and constraints, ethical considerations, and students' opinions regarding the role of lecturers and the integration of AI in tax learning. The analysis focused primarily on qualitative data derived from open-ended responses, while Likert-scale items were used to provide descriptive contextual information.

2. Data Analysis and Trustworthiness

The qualitative data were analyzed using thematic analysis following the six-phase framework proposed by Braun and Clarke [14], which is widely applied in educational and social science research. The analysis began with data familiarization, during which all responses were read repeatedly to obtain an overall understanding of students' experiences with AI in tax learning. This was followed by the generation of initial codes through an inductive process, identifying meaningful segments related to perceived benefits, learning effectiveness, motivation, challenges, ethical considerations, and expectations regarding AI use.

In the subsequent phase, related codes were grouped into broader themes that reflected recurring patterns across participants. These themes were then reviewed

and refined to ensure internal coherence and clear distinctions between themes while maintaining alignment with the research objectives. Each theme was subsequently defined and named to capture its core meaning and relevance to the research questions. Finally, the themes were interpreted and integrated into a coherent narrative that links empirical findings with existing literature on AI in higher education and tax education.

To enhance the trustworthiness of the findings, careful attention was paid to consistency in coding procedures and transparency in the analytic process. Repeated reviews of the data were conducted to minimize interpretive bias and to ensure that the identified themes accurately represented participants' responses. The use of a well-established analytic framework further supports the credibility and dependability of the qualitative analysis.

RESULTS AND DISCUSSION

This section presents the research findings and discussion based on two complementary sources of data: (1) descriptive data derived from Likert-scale questionnaire items and (2) qualitative data obtained from open-ended questionnaire responses. Consistent with the qualitative descriptive research design, Likert-scale data are used to provide contextual and descriptive insights into students' general perceptions of AI use, while the primary analytical emphasis is placed on thematic patterns identified from the open-ended responses.

1. Overview of Respondents and AI Usage Patterns

The respondents consisted of undergraduate students enrolled in accounting and taxation programs at the University of Lampung and the Lampung State Polytechnic who were currently taking or had previously completed taxation-related courses. All respondents reported prior experience using AI-based applications, particularly generative AI chatbots, as supplementary learning tools in tax learning. AI was commonly used to support understanding of taxation concepts, interpretation of tax regulations, assistance with calculations, and exploration of alternative explanations beyond classroom instruction.

Table 3. Respondent Demographics

Institution	Gender	
	Male	Female
Universitas of Lampung	19	69
Lampung State Polytechnic	9	46

The results indicate that female students constituted the majority of respondents across both institutions. This distribution reflects the actual composition of students enrolled in accounting and taxation programs at the participating institutions.

With regard to AI usage frequency, respondents reported varying levels of engagement with AI applications for learning taxation. As shown in Table 3, most students indicated frequent use of AI tools, suggesting that AI has become an integral component of their learning practices.

Table 4. Frequency of AI Use in Tax Learning

Frequency	Very Rare	Rare	Some times	Often	Very Often
Use of AI applications for tax learning	0	19	41	76	7

The distribution shows that the majority of respondents used AI either often or sometimes, while none reported very rare usage. This variation suggests differing learning strategies and levels of reliance on AI, which subsequently shaped students' perceptions of AI effectiveness and its role in tax learning.

2. Descriptive Overview of Students' Use of AI in Tax Learning

Table 4 presents a descriptive overview of students' responses to Likert-scale items measuring access to, utilization of, and attitudes toward the use of AI in tax learning.

Tabel 5. Descriptive Results of Students' Responses to Likert-Scale Items on AI Use in Tax Learning

Dimension	Questionnaire Items	Likert-Scale					Mean
		1	2	3	4	5	
Access and Utilization	Familiarity with AI applications in taxation learning	2	16	63	47	15	3.40
	Frequency of AI use for explanations of taxation materials	2	10	35	75	21	3.72
	Use of AI for taxation-related calculations	4	27	55	46	11	3.23
	Use of AI to identify relevant taxation references	1	15	31	71	25	3.73
	Use of AI to prepare taxation summaries or notes	2	7	28	69	37	3.92
Learning Effectiveness	Understanding of basic taxation concepts	2	11	47	68	15	3.58
	Understanding of updated taxation regulations	4	22	48	55	14	3.37
	Interactivity and engagement in taxation learning	6	19	67	37	14	3.24
	Efficiency in completing taxation assignments	2	10	47	61	23	3.65
	Confidence in presenting taxation materials	6	25	81	25	6	3.00
	Motivation to learn taxation	2	26	81	29	5	3.06
	Initiative to seek additional taxation-related information	0	7	41	67	28	3.81

Dimension	Questionnaire Items	Likert-Scale					Mean
		1	2	3	4	5	
Learning Motivation and Attitudes	Engagement in taxation courses	5	28	70	31	9	3.08
	Support for independent learning	0	9	33	71	30	3.85
	Perception of AI as a learning companion	0	10	64	49	20	3.55
Challenges and Constraints	Difficulty understanding overly technical AI explanations	1	14	44	52	32	3.70
	Experience of inaccurate AI-generated information	0	3	23	48	69	4.28
	Tendency toward overreliance on AI	8	23	72	34	6	3.05
	Limitations of AI in addressing Indonesian tax cases	3	6	33	59	42	3.92
	Lack of lecturer guidance on AI use	5	18	67	40	13	3.27
Ethics and Sustainability	Awareness of ethical AI use	0	9	49	65	20	3.67
	Avoidance of direct copying of assignment answers	1	12	60	44	26	3.57
	Need for institutional regulation of AI use	2	12	53	54	22	3.57
	AI as a support tool rather than a replacement for critical thinking	0	3	23	60	57	4.20
	Future development of AI use in taxation education	0	1	42	61	39	3.97

Note: Likert scale ranges from 1 = Very Rare to 5 = Very Often.

Overall, the descriptive results indicate that students are generally familiar with various AI applications and frequently use AI to support learning activities in taxation courses. AI is commonly utilized to seek explanations of tax concepts, summarize learning materials, and assist with completing academic tasks. The findings also suggest that students perceive AI as beneficial for improving learning efficiency and supporting understanding of complex tax regulations. Items related to learning motivation and self-directed study show relatively positive tendencies, indicating that AI encourages students to engage more actively with learning materials beyond classroom settings. At the same time, responses related to challenges and ethical considerations reveal moderate concerns regarding information accuracy, potential overreliance on AI, and the need for responsible use. These descriptive findings provide an important contextual background for interpreting students' experiences, which are explored in greater depth through thematic analysis of open-ended responses.

3. Thematic Analysis of Open-Ended Responses and Interpretation

The primary findings of this study are derived from thematic analysis of students' responses to open-ended questionnaire questions. The analysis resulted in several recurring themes that capture students' perceptions of the use of AI in tax learning. A summary of the identified themes, subthemes, and representative student responses is presented in Table 5.

Table 6. Results of Thematic Analysis of Students' Perceptions of AI Use in Tax Learning

Questionnaire Item	Student Responses	Sub-theme	Main Theme
Main benefits of AI use in tax learning	Helps understand complex tax regulations	Simplification of regulations	AI as a learning support tool
	Facilitates searching for tax information (regulations, rates, examples)	Concept clarification	
	Supports completion of academic assignments	Applied learning support	
Major challenges in using AI	Inaccurate or irrelevant explanations and calculations	Local regulation mismatch	Limitations of AI
	Outdated or incorrect regulatory references	Risk of misinformation	
	Lack of specific prompts due to limited tax knowledge	Insufficient contextual input	
Role of lecturers in guiding AI use	Lack of explicit guidance on AI use	Usage regulation	Role of lecturers
	Guidance to prioritize official tax sources over AI	Critical literacy	
	Emphasis on ethical and responsible AI use	Academic integrity	
Suggestions for improving AI use	Use AI as a supplementary tool	AI as complementary support	Optimization of AI use
	Clear lecturer guidance and usage boundaries	Contextualized learning	
	Training on effective prompting strategies	Prompt literacy	

3.1. Integration of Descriptive and Thematic Findings

The descriptive results obtained from the Likert-scale items provide an overview of students' general tendencies toward the use of AI in tax learning, indicating predominantly positive perceptions regarding accessibility, learning efficiency, and support for independent study, alongside moderate concerns related to information accuracy, contextual relevance, and potential overreliance. These quantitative tendencies are further elaborated and explained through the thematic analysis of open-ended responses.

While the Likert-scale data suggest frequent use of AI and perceived learning benefits, the qualitative findings clarify that these positive perceptions are closely associated with AI's ability to simplify complex tax regulations, clarify technical concepts, and provide flexible learning support beyond classroom settings. Conversely, concerns reflected in the descriptive results—such as doubts about accuracy and contextual suitability—are substantiated by students' narratives describing inaccurate outputs, limitations in addressing

Indonesian tax cases, and insufficient lecturer guidance.

This integration demonstrates that the descriptive and thematic analyses are complementary rather than redundant. The Likert-scale data offer contextual breadth by capturing overall response patterns, whereas the thematic analysis provides interpretive depth by revealing students' underlying reasoning, experiences, and expectations. Together, these findings suggest that students perceive AI as a beneficial learning support tool when used critically, ethically, and under clear pedagogical guidance from lecturers.

3.2. AI as a Learning Support Tool in Tax Education

The findings indicate that students primarily perceive Artificial Intelligence as a supportive learning aid that facilitates understanding of complex and regulation-based tax materials. AI is valued for its ability to simplify statutory language, provide structured explanations, and offer illustrative examples, thereby reducing cognitive load when engaging with technically dense content. This perception is consistent with prior studies emphasizing AI's role in supporting personalized learning and adaptive explanation in higher education [2], [4].

In the context of tax education, the supportive function of AI is particularly salient due to the discipline's reliance on legal interpretation and frequent regulatory changes. Importantly, students do not perceive AI as replacing lecturers or authoritative tax sources, but rather as a complementary tool that assists preliminary understanding before consulting formal regulations. This finding supports earlier research suggesting that AI is most effective when positioned as an auxiliary resource within a structured pedagogical framework [5], [6].

3.3. Learning Motivation and Self-Directed Study

The results further demonstrate that AI contributes to enhanced learning motivation and self-directed study. Students describe AI as enabling flexible, independent exploration of tax topics beyond classroom hours, which supports initiative and confidence in learning. This aligns with previous research indicating that AI-based tools can foster learner autonomy and engagement by providing immediate and personalized feedback [3], [7].

However, students also acknowledge that excessive reliance on AI may limit deeper engagement if not accompanied by critical reflection. This nuanced perception reflects findings in earlier studies that emphasize the importance of digital literacy and metacognitive skills in ensuring that AI use supports, rather than substitutes, meaningful learning [7], [12]. Thus, AI appears to function as a motivational catalyst when integrated into self-regulated learning practices.

3.4. Challenges and Contextual Limitations of AI Use

Despite the perceived benefits, students identify significant limitations related to accuracy and contextual relevance, particularly concerning Indonesian tax regulations. Instances of outdated rules, generalized explanations, and mismatches with local regulatory frameworks highlight the constraints of AI in regulation-based disciplines. These concerns echo prior research warning of the risks associated with uncritical reliance on AI-generated content, especially in domains requiring high precision [6], [15].

Additionally, students report difficulties arising from overly technical explanations and the need for precise prompts to obtain relevant outputs. This finding reinforces the argument that AI effectiveness is highly context-dependent and contingent on users' domain knowledge and digital competence [4]. In tax education, where accuracy is critical, these limitations underscore the necessity of combining AI use with authoritative sources and instructional guidance.

3.5. The Role of Lecturers in Guiding AI Use

Students consistently emphasize the central role of lecturers in guiding and regulating AI use in tax learning. Lecturers are expected to provide clear boundaries, promote critical evaluation of AI-generated information, and reinforce ethical standards. This expectation aligns with prior studies highlighting the importance of pedagogical mediation in technology-enhanced learning environments [2], [12].

The findings suggest that lecturer guidance can mitigate risks related to misinformation and overreliance by embedding AI use within instructional objectives and professional norms. Rather than functioning independently, AI is perceived as most effective when integrated into teaching strategies that encourage verification, reflection, and ethical awareness.

3.6. Ethical Awareness and Responsible Use of AI

Ethical awareness emerges as a salient dimension of students' perceptions. Students generally recognize the importance of avoiding direct copying, maintaining academic integrity, and using AI as a support tool rather than a replacement for critical thinking. This finding is consistent with recent literature emphasizing ethical concerns surrounding generative AI, including academic misconduct and erosion of higher-order thinking skills [6], [12].

Furthermore, students' support for institutional policies indicates an understanding that ethical AI use requires

collective regulation. In professional and regulation-based fields such as taxation, responsible AI integration is closely linked to professional competence and accountability.

4. Discussion

The findings of this study provide a nuanced understanding of how students perceive the use of Artificial Intelligence (AI) in tax learning, particularly within a regulation-based and professionally oriented educational context. Overall, the results reinforce existing evidence that AI can enhance learning effectiveness, motivation, and accessibility in higher education, while also highlighting contextual constraints that are especially salient in taxation education.

Consistent with prior research on AI-supported learning, students in this study perceive AI as facilitating personalized and self-directed learning by offering flexible access to explanations, summaries, and alternative problem-solving approaches [3], [4]. In line with findings reported by Chen et al. [5], AI-based conversational tools are perceived as improving engagement and interaction, particularly when students encounter difficulties understanding complex concepts. In the context of tax education, these benefits are amplified because AI helps students navigate dense regulatory texts and supports preliminary comprehension before engaging with formal legal sources.

However, the findings also underscore that the educational value of AI in tax learning is not unconditional. Students' concerns regarding information accuracy, outdated regulations, and limited contextual relevance to Indonesian tax cases echo warnings raised in the literature about the risks of uncritical reliance on generative AI [6]. These issues are particularly critical in taxation, where precision, regulatory compliance, and professional accountability are essential. The results therefore extend previous AI-in-education studies by demonstrating that regulation-based disciplines impose stricter requirements on AI use compared to more conceptually oriented fields.

The emphasis placed by students on the role of lecturers further reinforces the pedagogical importance of guided AI integration. Consistent with the arguments of Luckin et al. [2] and Tlili et al. [12], this study finds that AI is perceived as most effective when embedded within clear instructional strategies that encourage verification, critical reflection, and ethical awareness. Rather than diminishing the role of educators, AI use in tax learning appears to increase the need for pedagogical mediation, particularly in helping students evaluate AI-generated information against authoritative tax regulations.

Ethical considerations constitute another key dimension of the discussion. Students' awareness of academic integrity and their support for institutional regulation of AI use align with broader concerns in the literature regarding the ethical implications of generative AI in higher education [6]. In professional fields such as taxation, ethical AI use is closely connected to the development of professional judgment and responsibility. The findings suggest that fostering ethical awareness should be an integral component of AI-supported tax education, rather than an ancillary consideration.

Taken together, the results indicate that AI holds substantial potential as a learning support tool in tax education, but its effectiveness depends on critical use, lecturer guidance, and alignment with professional and ethical standards. By situating students' perceptions within the broader AI-in-education literature, this study contributes context-specific insights that highlight the opportunities and limitations of AI integration in regulation-based disciplines. These insights underscore the need for pedagogically grounded and ethically informed approaches to AI adoption in higher education.

CONCLUSION

This study aimed to explore students' perceptions of the use of Artificial Intelligence (AI) in tax learning within higher education. Based on the findings, students generally perceive AI as a valuable learning support tool that helps them understand complex and regulation-based tax materials, improves learning efficiency, and supports self-directed learning beyond the classroom. AI is commonly used to obtain explanations of taxation concepts, summarize learning materials, and assist with completing academic tasks.

At the same time, the study reveals important challenges associated with AI use in tax learning. Students express concerns regarding the accuracy and relevance of AI-generated information, particularly in relation to Indonesian tax regulations, as well as the risk of overreliance on AI and ethical issues related to academic integrity. These findings indicate that while AI offers significant benefits, its use in tax education requires careful and critical engagement.

The results of this study imply that AI should be positioned as a complementary learning aid rather than a substitute for lecturers or authoritative tax sources. Effective integration of AI in tax learning depends on clear pedagogical guidance, the development of students' critical digital literacy, and institutional support to promote responsible and ethical use. In practice, AI can be applied to support preliminary understanding, independent study, and learning

flexibility, provided that students are encouraged to verify AI-generated information using official regulations and credible references.

Future research may build on this study by examining AI use in tax learning across different institutions, educational levels, or regulatory contexts, or by employing longitudinal or mixed-method approaches to further investigate how students' perceptions of AI evolve over time and how AI use relates to learning outcomes in regulation-based disciplines.

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