EXPLORING DIPLOMA STUDENTS' PERCEPTIONS OF AN INTERACTIVE CHATBOT AS A LEARNING SUPPORT TOOL IN BUSINESS LAW

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Abstract: This exploratory study examines diploma students' perceptions of an interactive chatbot implemented as a supplementary learning support tool in a Business Law course at Kolej Profesional MARA Seri Iskandar, Perak. Employing an exploratory mixed-methods approach, quantitative data were collected through a survey of 41 students using a four-point Likert scale to measure usability, learning effectiveness, engagement, credibility, and satisfaction, complemented by qualitative insights from open-ended responses. Descriptive analysis revealed consistently high levels of agreement across all constructs, with mean scores ranging from 3.39 to 3.69 out of 4. Reliability analysis demonstrated strong internal consistency, with Cronbach's alpha values exceeding 0.85 for all major constructs. Correlation analysis indicated strong positive associations among perceived learning effectiveness, engagement, and satisfaction. In contrast, the relationship between chatbot usage frequency and these learning constructs was weak but positive, suggesting that interaction quality may be more salient than usage intensity. In addition, a descriptive comparison of academic performance across two consecutive semesters was presented as contextual evidence, revealing a shift towards higher grade distributions following the introduction of the chatbot, without making causal claims. Qualitative findings further suggest that students perceived the chatbot as helpful in clarifying legal concepts, reducing anxiety in seeking clarification, and supporting self-directed learning. Overall, the findings indicate that interactive chatbots demonstrate pedagogical promise as supplementary learning tools in diploma-level Business Law education.

Keywords: Business Law, Interactive Chatbot, Learning Effectiveness, Students' Engagement.

1. Introduction

Business Law constitutes a fundamental component of diploma-level business programmes, as it introduces students to legal principles governing commercial activities, contractual relationships, and organisational responsibilities. Nevertheless, many diploma students experience the subject as demanding, particularly due to limited prior exposure to legal reasoning, statutory interpretation, and formal legal language (Hemarathne, 2025). These factors often increase cognitive demands and disengagement during the learning process.

Conventional approaches to teaching law-related courses commonly rely on lectures, prescribed texts, and instructor-prepared notes. While these methods remain pedagogically relevant, they may offer limited opportunities for immediate clarification or personalised support. As a result, students may hesitate to ask questions during class sessions, particularly when they perceive the subject as complex or intimidating (Wang, 2025). Such hesitation has been associated with heightened learning anxiety and reduced participation.

Recent developments in Artificial Intelligence (AI) have expanded the range of instructional tools available in higher education. Among these, educational chatbots have emerged as interactive systems capable of providing on-demand explanations, facilitating self-paced learning, and simulating conversational exchanges between learners and digital agents (Behforouz & Al Ghaithi, 2024). The non-evaluative nature of chatbot interactions offers a supportive alternative for students who are reluctant to engage verbally in traditional classroom environments.

Despite growing interest in chatbot-supported learning, empirical investigations in law-related subjects remain relatively limited, particularly at the non-law diploma level. Given the distinct learning profiles of diploma students, there is a need for context-specific studies that examine the pedagogical value of chatbots in supporting legal education for non-law students. To address this gap, an interactive chatbot was implemented as a supplementary learning tool in a Business Law course at Kolej Profesional MARA Seri Iskandar. This study explores the effectiveness of the chatbot from students' perspectives and examines its association with engagement and academic outcomes.

2. Literature Review

2.1 *Challenges in Teaching and Learning Business Law*

Learning law-related subjects, even at an introductory level, requires students to engage in analytical thinking, precise interpretation of legal language, and the application of abstract legal rules to practical or hypothetical scenarios (Ribery & Starza-Allen, 2023). For diploma students, these cognitive demands may be particularly challenging due to limited prior exposure to legal reasoning and unfamiliarity with statutory interpretation. When legal concepts are introduced without adequate scaffolding or contextualisation, students may experience cognitive overload, which impairs their ability to process, organise, and retain new information effectively (Sweller, 2011). As a result, students may resort to surface learning strategies, such as memorising legal terms and provisions, rather than developing a meaningful understanding of legal principles (Olop et. al., 2024).

Empirical studies have further shown that law-related subjects are often perceived by students as rigid, content-heavy, and highly technical, making them difficult to relate to real-life experiences (Avendano, 2022). This perception is particularly pronounced among non-law majors and diploma-level learners, who may struggle to see the practical relevance of legal doctrines in business or organisational contexts (Rigby et. al., 2024). When students are unable to connect abstract legal concepts to familiar situations, their motivation to engage actively with the subject matter may decline, leading to disengagement and reduced learning efficacy (Olop et.al., 2024).

In addition to cognitive challenges, affective factors also play a significant role in shaping students' learning experiences in legal education. Many students report experiencing anxiety when asking questions during class, stemming from fear of appearing uninformed, misunderstanding fundamental concepts, or being judged by peers and instructors (Hemarathne, 2025). This reluctance to seek clarification can hinder formative learning, as misconceptions go unaddressed and opportunities for immediate feedback are missed. Such challenges are often exacerbated in large-group instructional settings, where individualised support and interaction are limited (Carlos et al., 2023). Consequently, students may become increasingly passive, reinforcing a cycle of low confidence, reduced participation, and superficial learning.

2.2 *Chatbots and Artificial Intelligence in Education*

Educational chatbots are conversational agents that leverage artificial intelligence and natural language processing to interact with learners in a human-like manner (Okonkwo & Ade-Ibijola, 2021). In educational settings, these systems are commonly designed to provide instant feedback, respond to frequently asked questions, and guide learners through instructional content in a structured yet flexible way (Følstad & Brandtzæg, 2017). Unlike static digital resources, chatbots enable dynamic interaction by allowing learners to ask follow-up questions, seek clarification, and explore concepts iteratively, thereby supporting more active engagement with learning materials.

Empirical studies have demonstrated that the use of chatbots in education can enhance learner engagement by offering immediate, personalised responses that are often not feasible in conventional classroom environments (Chen et al., 2023). Chatbots also support self-paced learning by allowing students to access explanations at their own convenience and according to their individual learning needs (Behforouz & Al Ghaithi, 2024). This flexibility is particularly valuable for students who require

repeated exposure to complex concepts or who prefer to learn outside scheduled instructional hours. In addition, prior research suggests that chatbots can reduce instructors' repetitive workload by automating responses to routine queries, thereby enabling educators to focus on higher-order teaching tasks (Chen et al., 2023).

Within higher education contexts, chatbots have been associated with increased accessibility to academic support, especially beyond formal classroom hours. Their continuous availability allows learners to seek assistance during revision, assessment preparation, or independent study, thereby extending learning support beyond the temporal and spatial constraints of traditional instruction (Okonkwo & Ade-Ibijola, 2021). This feature is particularly relevant in blended and technology-enhanced learning environments, where students are expected to take greater responsibility for managing their own learning.

Importantly, the non-judgmental and private nature of chatbot interaction has been highlighted as a key pedagogical advantage. Unlike face-to-face classroom interactions, chatbot-mediated communication reduces social pressure and fear of negative evaluation, enabling students to ask questions more freely and without embarrassment (Chen et al., 2023). This characteristic may be especially beneficial for learners who are hesitant to participate actively in class discussions or who lack confidence in their understanding of complex subject matter (Okonkwo & Ade-Ibijola, 2021). As such, chatbots have the potential not only to support cognitive learning processes but also to address affective barriers that commonly hinder student engagement in challenging academic subjects.

2.3 *Theoretical Framework*

This study is grounded in constructivist and self-directed learning theories. From a constructivist standpoint, learning is understood as an active process in which knowledge is developed through interaction, reflection, and meaning-making rather than passive reception of information (Powell & Kalina, 2009). The chatbot facilitates such engagement by enabling learners to ask questions, explore explanations, and revisit legal concepts through conversational interaction.

Self-directed learning theory further emphasises learners' capacity to take responsibility for planning, monitoring, and evaluating their own learning activities (Knowles, 1975). In this context, the chatbot functions as an accessible learning companion that supports autonomous learning by allowing students to seek clarification and reinforcement of legal concepts independently of scheduled classroom sessions.

3. Methodology

3.1 *Research Design*

This study adopted an exploratory mixed-method research design, aimed at identifying preliminary patterns, learner perceptions, and associative relationships regarding the use of an interactive chatbot in teaching Business Law, rather than establishing causal effects. Quantitative data were collected through a structured questionnaire to examine students' perceptions of the chatbot across key learning constructs. In contrast, qualitative data from open-ended questions were used to contextualise and deepen understanding of students' reported learning experiences. In addition, a descriptive comparison of academic performance across two consecutive semesters was conducted as contextual evidence to complement students' self-reported perceptions, without making causal claims regarding the impact of chatbot usage.

3.2 *Participants*

The participants comprised 41 diploma students enrolled in a Business Law course at Kolej Profesional MARA Seri Iskandar during the semester in which the interactive chatbot was implemented. All participants were Semester 4 students in the Diploma in Business Information Technology (DBIT)

programme, required to take Business Law as a core course. As non-law majors, these students had limited formal exposure to legal studies prior to this course, making them an appropriate group for examining the effectiveness of chatbot-supported learning in a law-related subject.

Participation in the survey was voluntary, and all responses were anonymised to ensure confidentiality. The focus on Semester 4 DBIT students provides a relevant context for this exploratory study, as these learners possess intermediate academic maturity and technological familiarity, which may influence their engagement with AI-based learning tools such as chatbots.

3.3 *Instrumentation*

The questionnaire consisted of two sections designed to capture both structured perceptions and open-ended reflections on chatbot-supported learning. The first section included Likert-scale items measured on a four-point scale (1 = strongly disagree to 4 = strongly agree), covering five constructs: usability, learning effectiveness, engagement, credibility, and satisfaction. The second section comprised four open-ended questions that invited students to share their experiences, perceived benefits, challenges, and suggestions for improvement.

3.4 *Data Analysis*

Quantitative data were analysed using descriptive statistics, including mean scores and standard deviations, to identify overall trends in perceptions. Reliability analysis using Cronbach's alpha was conducted to assess internal consistency. In contrast, Pearson's correlation analysis was employed to explore associations among key learning constructs.

In addition, students' final grade distributions from two consecutive semesters were compared descriptively. The first semester did not involve a chatbot, while the second semester did. This comparison was used as contextual evidence rather than inferential analysis.

Given the exploratory nature of the study, modest sample size, and absence of experimental manipulation, inferential statistical testing was not pursued. Instead, the analysis focused on identifying meaningful descriptive and correlational patterns to inform future empirical research.

4. Findings

4.1 *Descriptive Statistics of Students' Perceptions*

A descriptive analysis was conducted to examine students' perceptions of the interactive chatbot across five key constructs: usability, learning effectiveness, engagement, credibility, and satisfaction. The results demonstrate high to very high levels of agreement across all constructs, indicating that students generally responded positively to the integration of the chatbot as a learning support tool in the Business Law course. This overall pattern suggests strong acceptance among students, reflecting their readiness to engage with chatbot-supported learning in a law-related subject.

Table 1: Descriptive Statistics of Chatbot Perception Constructs (n = 41)

Constructs	Means	SD
Usability	3.45	0.41
Learning Effectiveness	3.69	0.36
Engagement	3.62	0.38
Credibility	3.39	0.43
Satisfaction	3.64	0.35

Scale: 1 = Strongly Disagree, 4 = Strongly Agree

As presented in Table 1, learning effectiveness recorded the highest mean score (M = 3.69, SD = 0.36). This finding indicates that students perceived the chatbot as particularly effective in helping them understand legal concepts, clarify doubts, and reinforce learning beyond formal classroom instruction.

The high mean score, coupled with a relatively low standard deviation, suggests that this perception was shared consistently among most respondents rather than being confined to a small group of students.

Satisfaction (M = 3.64, SD = 0.35) and engagement (M = 3.62, SD = 0.38) also recorded very high mean scores, highlighting students' positive learning experiences when using the chatbot. The high satisfaction score reflects students' overall approval of the chatbot as a supportive learning tool. In contrast, the high engagement score suggests that the chatbot encouraged more active engagement with the course content. Together, these findings imply that the chatbot did not merely function as an informational tool but also contributed to a more engaging and motivating learning environment.

Although credibility recorded the lowest mean score among the constructs (M = 3.39, SD = 0.43), it remained within the high range. This indicates that students generally trusted the chatbot's responses and perceived the information provided as reliable for learning support. The slightly lower credibility score may reflect students' awareness that the chatbot served as a supplementary tool rather than a replacement for lecturers or authoritative legal sources. Nevertheless, the high overall credibility rating suggests that students were confident in using the chatbot to support their understanding of Business Law concepts.

Usability (M = 3.45, SD = 0.41) also achieved a high mean score, indicating that students found the chatbot easy to access and navigate. This suggests that technical barriers did not significantly hinder students' interaction with the chatbot, thereby enabling them to focus on learning rather than system-related difficulties. The favourable usability rating further supports the feasibility of integrating chatbot technology into diploma-level courses without imposing additional cognitive or technical burdens on students.

Overall, the consistently high mean scores and low standard deviations across all constructs indicate strong consensus among students about the chatbot's usefulness. These findings suggest that the positive perceptions of the chatbot were widespread across the sample, reinforcing its potential as an effective supplementary learning tool in teaching Business Law at the diploma level.

4.2 *Reliability Analysis*

Following the descriptive analysis presented in Table 1, a reliability analysis was conducted to assess the internal consistency of the questionnaire items measuring each construct. While the mean scores in Table 1 indicate students' overall perceptions of the chatbot, reliability analysis is necessary to determine whether the items within each construct consistently measure the same underlying concept.

Table 2: Reliability Analysis of Measurement Constructs (Cronbach's Alpha)

Constructs	Number of Items	Cronbach's Alpha
Usability	5	> 0.85
Learning Effectiveness	5	> 0.90
Engagement	5	> 0.85
Credibility	5	> 0.88
Satisfaction	3	> 0.90

As shown in Table 2, Cronbach's alpha values for all constructs exceeded the commonly accepted threshold of 0.70, indicating satisfactory to strong internal reliability. Notably, most constructs showed alpha values above 0.85, indicating high consistency among the items measuring usability, learning effectiveness, credibility, engagement, and satisfaction.

The high reliability values strengthen the interpretation of the descriptive results reported in Table 1. Specifically, the consistently high mean scores across constructs are supported by strong internal consistency, indicating that students' responses were not random or inconsistent across items. Instead, the items within each construct worked cohesively to reliably capture students' perceptions of chatbot-supported learning.

Learning effectiveness and satisfaction recorded particularly high Cronbach's alpha values ($\alpha > 0.90$), suggesting that the items measuring these constructs were highly consistent in reflecting students' perceived learning benefits and overall approval of the chatbot. Similarly, the strong reliability observed for usability, credibility, and engagement indicates that students' positive evaluations of the chatbot were assessed using stable, dependable indicators.

Overall, the reliability analysis confirms that the measurement instrument employed in this study was robust and appropriate for examining students' perceptions of the interactive chatbot. By demonstrating strong internal consistency across all constructs, the findings reported in Table 1 can be interpreted with greater confidence, thereby reinforcing the validity of subsequent analyses and interpretations presented in this study.

With the measurement instrument demonstrating strong internal consistency across all constructs, as evidenced by the reliability results in Table 2, the study proceeded to examine the relationships between key learning constructs. The following correlation analysis examines how students' perceived learning effectiveness, engagement, and satisfaction are descriptively related to one another and to chatbot usage frequency.

4.3 *Correlation Analysis*

Following the establishment of strong internal consistency across all measurement constructs, a correlation analysis was conducted to examine the descriptive relationships among key learning variables. Specifically, this analysis examined the relationships between students' perceived learning effectiveness, engagement, and satisfaction, as well as their relationship with the frequency of chatbot usage. The purpose of this analysis was not to establish causality, but to identify meaningful associative patterns that could provide further insight into students' learning experiences with the interactive chatbot.

Table 3: Summary of Correlation Patterns Between Key Variables

Variables Compared	Relationship Pattern
Learning Effectiveness – Engagement	Strong positive
Learning Effectiveness – Satisfaction	Strong positive
Engagement – Satisfaction	Strong positive
Frequency of Chatbot Usage – Learning Effectiveness	Weak positive
Frequency of Chatbot Usage – Engagement	Weak positive
Frequency of Chatbot Usage – Satisfaction	Weak positive

Note: Correlation patterns are reported descriptively in line with the exploratory nature of the study

The analysis, as shown in Table 3, revealed strong positive relationships among learning effectiveness, engagement, and satisfaction. Students who perceived the chatbot as effective in supporting their understanding of Business Law also tended to report higher levels of engagement with learning activities and greater overall satisfaction with the learning experience. This pattern suggests that these constructs are closely interrelated and may reinforce one another within a chatbot-supported learning environment.

The strong association between learning effectiveness and engagement indicates that when students perceived the chatbot as helpful in clarifying legal concepts and reinforcing understanding, they were more likely to interact actively with course materials. Similarly, the strong positive relationship between learning effectiveness and satisfaction suggests that perceived learning benefits contributed substantially to students' overall approval of the chatbot as a learning support tool. The close relationship between engagement and satisfaction further indicates that students who were more actively engaged through chatbot interactions also experienced greater satisfaction with their learning process.

In contrast, the relationship between chatbot usage frequency and the main learning constructs was found to be weak but positive. This finding suggests that while increased usage may be associated with slightly higher perceptions of effectiveness, engagement, and satisfaction, the magnitude of this relationship is limited. In other words, students' positive learning experiences were not determined solely by how often they used the chatbot, but rather by how meaningful and relevant the interactions were to their learning needs.

Overall, the correlation patterns observed in this study provide additional support for the descriptive findings reported earlier. The strong associations among learning effectiveness, engagement, and satisfaction support the interpretation that the chatbot contributed to a cohesive, positive learning experience. At the same time, the weak relationship involving usage frequency highlights the importance of interaction quality over quantity, underscoring the pedagogical value of well-designed chatbot responses in supporting Business Law learning.

4.4 *Descriptive Comparison of Academic Performance Across Semesters*

A descriptive comparison was conducted to examine students' academic performance across two consecutive semesters. The first semester did not involve the chatbot, while the second semester used it as a learning support tool.

The comparison reveals a clear shift in grade distribution following the introduction of the chatbot. In the semester without chatbot implementation, no students achieved Grade A, and the largest proportion (35.0%) obtained Grade C–, indicating a concentration of lower academic outcomes. Grades in the B range were relatively limited, with only 5.0% obtaining B– and 10.0% obtaining B.

In contrast, during the semester in which the chatbot was introduced, higher-grade outcomes emerged, including 3.57% of students achieving Grade A and 3.57% achieving Grade A–. The proportion of students earning grades in the B range also increased, with 17.86% earning Grade B and 10.71% earning Grade B–. At the same time, the proportion of students receiving Grade C– decreased substantially from 35.0% to 21.43%.

Although this descriptive comparison does not establish a causal relationship between chatbot use and academic performance, the observed increase in higher-grade outcomes alongside a reduction in lower-grade results provides contextual evidence of a positive association between chatbot-supported learning and improved academic performance.

4.5 *Qualitative Findings*

Thematic analysis of the open-ended responses identified three dominant themes reflecting students' learning experiences with the interactive chatbot: improved understanding of legal concepts, reduced anxiety when asking questions, and enhanced engagement with learning materials.

First, many students reported that the chatbot helped them clarify complex, abstract legal concepts, particularly those involving legal terminology and application-based questions. Students highlighted that the chatbot enabled them to revisit explanations multiple times and to ask follow-up questions when initial explanations were unclear. This suggests that the chatbot served as a supplementary learning aid, supporting cognitive processing and reinforcing understanding beyond what was achievable with lecture notes alone.

Second, a prominent theme that emerged from the responses was reduced anxiety and increased confidence in seeking clarification. Several students indicated they felt more comfortable asking questions through the chatbot than in face-to-face classes. The absence of judgment and the private nature of chatbot interaction appeared to lower psychological barriers, allowing students to seek clarification without fear of embarrassment or negative evaluation. This finding is particularly

significant in the context of Business Law, where students may be reluctant to admit they have difficulty understanding foundational legal principles.

Third, students reported greater engagement and motivation in their learning. The chatbot's availability outside scheduled class hours enabled students to engage with course content at their own pace and according to their individual learning needs. Some students described the chatbot as a convenient revision tool that encouraged independent learning and sustained engagement, especially during assessment preparation. This indicates that the chatbot not only supported understanding but also promoted more active and self-directed learning behaviours.

Overall, these qualitative findings complement the quantitative results by providing deeper insight into how and why students perceived the chatbot as effective. While the survey data showed high levels of agreement on learning effectiveness, engagement, and satisfaction, the qualitative responses illuminate the mechanisms through which the chatbot supported students' learning experiences. Together, these findings strengthen the argument that the interactive chatbot served as a meaningful and supportive learning tool in teaching Business Law at the diploma level.

5. Discussions

The findings of this exploratory study indicate that the interactive chatbot was positively perceived by diploma students as a learning support tool in Business Law, particularly in terms of learning effectiveness, engagement, and overall satisfaction. High mean scores across learning effectiveness, engagement, and satisfaction, combined with low standard deviations, suggest that students not only viewed the chatbot favourably but also shared relatively consistent perceptions of its usefulness. This consistency strengthens the interpretation that the chatbot addressed common learning challenges faced by students rather than benefiting only a small subgroup.

From a pedagogical perspective, the strong positive associative relationships between learning effectiveness, engagement, and satisfaction suggest that perceived learning benefits played a central role in shaping students' motivation and approval of the chatbot-supported learning environment. This associative pattern aligns with prior research suggesting that conversational agents can enhance learner engagement by providing timely explanations and reducing psychological barriers to participation (Winkler & Söllner, 2018).

Viewed through a constructivist lens, the chatbot functioned as a digital learning scaffold that supported iterative meaning-making through question–response interaction, particularly for abstract and terminology-heavy legal concepts. By allowing students to ask questions, seek clarification, and revisit explanations at their own pace, the chatbot facilitated reflective learning processes consistent with constructivist principles. This is particularly relevant in Business Law education, where abstract concepts and legal reasoning often require repeated exposure and contextual explanation.

In addition, the chatbot's continuous availability beyond scheduled class sessions aligns with principles of self-directed learning, enabling students to independently regulate the pace, timing, and depth of their engagement with legal content. Students were able to take greater responsibility for managing their learning by accessing explanations independently and at their own convenience. This autonomy may be especially beneficial for diploma students, who often vary in prior knowledge and learning confidence.

The weak but positive relationship between chatbot usage frequency and perceived learning outcomes suggests that pedagogical value was not driven solely by usage intensity, but rather by the relevance and quality of chatbot interactions in addressing learners' immediate conceptual needs. Instead, the quality, relevance, and clarity of the chatbot's responses may have played a more significant role in shaping students' learning experiences. This finding supports earlier studies suggesting that meaningful interaction, rather than usage intensity alone, is critical for determining the effectiveness of educational chatbots (Chen et al., 2023).

Furthermore, the descriptive comparison of academic performance across semesters provides contextual support for students' perceived learning experiences. While no causal inference can be drawn due to cohort differences and the absence of experimental control, the observed shift towards higher grade distributions complements the survey and qualitative findings. Although causal conclusions cannot be drawn, the convergence of descriptive survey trends, associative patterns, qualitative insights, and contextual academic outcomes strengthens the argument that interactive chatbots hold pedagogical promise as supplementary tools in diploma-level Business Law education.

6. Implications and Limitations

The findings of this study offer several practical implications for teaching and learning in law-related subjects at the diploma level. First, interactive chatbots may serve as effective supplementary tools to support students' understanding of complex legal concepts, particularly in contexts where classroom time is limited. Second, chatbots can help reduce students' anxiety when asking questions by providing a non-judgmental, private learning environment, thereby encouraging more active engagement with course content.

From an institutional perspective, integrating chatbots into Business Law courses may contribute to more learner-centred pedagogical practices, especially in Technical and Vocational Education and Training (TVET) and diploma institutions. However, this study is subject to several limitations. The sample size was relatively small and drawn from a single institution, which limits the generalisability of the findings. In addition, the study relied primarily on descriptive analysis without inferential statistical testing, and the comparison of academic performance across semesters was exploratory.

Future research may employ experimental or quasi-experimental designs, larger sample sizes, and inferential analyses to examine the impact of chatbot-supported learning on academic performance. Longitudinal studies may also provide deeper insights into how sustained chatbot use influences learning outcomes over time.

7. Conclusion

This exploratory study examined the effectiveness of an interactive chatbot as a learning support tool in teaching Business Law to diploma students at Kolej Profesional MARA Seri Iskandar. The findings indicate that students perceived the chatbot as effective, engaging, and supportive of their learning, with high mean scores and low variability across key constructs. Strong descriptive relationships among learning effectiveness, engagement, and satisfaction further suggest that the chatbot positively contributed to students' learning experiences.

Although the study does not establish causal relationships, the descriptive improvement in academic performance across semesters and the positive qualitative feedback provide encouraging evidence of the chatbot's pedagogical potential. Overall, the study highlights the value of integrating interactive chatbots as supplementary tools in Business Law education, particularly within diploma contexts. With further refinement and empirical investigation, chatbot-supported learning environments may play an increasingly important role in enhancing legal education at the foundational level.

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