ARTIFICIAL INTELLIGENCE (AI) TOOLS: AN INVESTIGATION ON ENGLISH LANGUAGE UNDERGRADUATE STUDENTS' ATTITUDE ABOUT THE BENEFITS AND DRAWBACKS

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Abstract

This descriptive study aims at finding out students' awareness about the benefits and harm that they have experienced from using AI tools during their learning process. A four-section survey including open and closed-ended questions was sent out, and 193 majored-English students at Thu Dau Mot University responded randomly. The striking finding is that although students preferred AI tools to support their learning, they themselves accepted the benefits gained and the challenges faced were just a little over the average. In particular, the participants confirmed that AI tools contribute much to the fast speed of their academic work completion, but AI also makes them passively think, become inflexible, and somewhat limit the ability to equip knowledge for their English language competence.

Keywords: AI, artificial intelligence, benefits, drawbacks, student perception

1. Introduction

The development of Artificial Intelligence (AI) has been made in several fields and has become the power source for many applications of our daily lives. As it develops further, AI has the power to introduce enormous changes in both economics and society, especially in education. Up to now, researchers have recognized that the emergence of AI has somehow revolutionized schools and classrooms and made educators' jobs easier (Wogu et al., 2019). According to Tahiru (2021), a steady and slow tendency to change and adapt educational tools and equipment was recorded in different educational organizations. This trend was also spotted in the application of AI in education by Dickson (2017), which is spanning from around the 20th century until these days. A systematic literature review was carried out, in which several articles that focus mainly on AI in education (AIEd) from a 10-year period (2012-2021) were selected and analyzed by Chiu et al. (2023). This review showed that among 92 chosen articles, AI has been used in every phase of education, from primary and secondary education to higher education, as well as in different learning subjects such as physical education, computer science, mathematics, etc. Chiu et al. (2023) review also pointed out that AI was commonly used in four major areas of education, including "learning, teaching, assessment, and administrative tasks".

In terms of language learning, Chiu et al. (2023) divided AI's usage into four aspects, including "assigning tasks based on individual competence; providing human-machine conversation; analyzing student work for feedback; and increasing adaptability and interactivity in the digital environment" (Chiu et al., 2023). While the use of AI in assigning language tasks and its implementation in the digital environment are still at the "exploratory stage," two other aspects are better studied (Chiu et al., 2023). On the one hand, using AI chat boxes in providing human-machine conversations was stated to engage students in continuing conversations and dialogues that will help with the improvement of their communication skills (Chew & Chua, 2020; Kim et al., 2021). Via the study, Kim et al. (2021) mentioned that the use of AI in speaking activities can "stimulate student's willingness to use English and improve their interaction," since students who performed their task with AI voice chat feel less anxious than those who performed their tasks in a quite intimidating face-to-face interaction. On the other hand, for the use of AI in providing feedback, Holstein et al. (2019) examined Lumilo, an AI analytics tool for teachers, and concluded that although it supports real-time feedback and anonymous teacher-student interaction, Lumilo is not very user-friendly.

According to Chiu et al. (2023), three main roles of AI technology were assigned to language teaching, including "providing adaptive teaching strategies; enhancing teacher's ability to teach; and supporting teacher professional development". In particular, Lampos et al. (2021) revealed that AI did help teachers adopt different teaching and communication approaches for a traditional autistic classroom, which does cover language learning. Furthermore, AI can help in developing and managing language learning materials (Gupta & Bhaskar, 2020) as well as creating an effective teaching evaluation model (Hu, 2021). Regarding online classrooms, despite various AI-integrated learning systems, Loeckx (2016) stated that "no significant impact can be observed, which shows—rather painfully—that the advances in technology have not improved the effectiveness of teaching".

In the aspect of language assessment, Chiu et al. (2023) accept that educators use AI in "providing automatic marking and predicting students' performance." According to Fu et al., (2020), AI scoring systems can provide "quite accurate speech recognition, social presence, peer influence, and immediate benefit" for language learners. This research further linked these factors with emotional and cognitive engagement, all of which exert both direct and indirect influence on learners' motivation since the feedback and marks can be given to students in a short time for formative feedback. It could even be returned immediately in the context of an online course (Chiu et al., 2023; Fu et al., 2020). In some cases, AI can even predict the quality of the students from the records of students' past performance (Akmeşe et al., 2021); however, which data should be selected for this prediction purpose is still an issue that needs addressing (Chiu et al., 2023).

In the final aspect of language education—administrative tasks, Chiu et al. (2023) suggested three main roles assigned to AI. These roles are "improving the performance of management platforms; providing convenient and personalized services; and supporting educational decision-making with evidence" (Chiu et al., 2023). Although little study has been conducted in this area, AI can help manage and secure learners' personal data, as well as recommend appropriate learning resources and classroom activities for both individual and group learners.

Some recent studies were conducted to survey the perception of students on the use of AI in education, the majority of which mainly focus on tertiary education (Djokic et al., 2024;

Dolenc & Brumen, 2024; Kim et al., 2020; Marrone et al., 2024). While Kim et al. (2020) paid attention to AI teaching assistants and its implementation in the classroom, Chan and Hu (2023) studied Generative AI and the way students use it in their learning process. Both studies reported that communication between students tends to go smoothly once they are quite familiar with AI technology itself, thus offering great support in personalized learning (Chan & Hu, 2023; Kim et al., 2020). Furthermore, Dolenc and Brumen (2024) recorded the advantages of using AI in education from both the perspective of computer science students and social science students. While computer science showed a somewhat positive outlook on the use of AI in the classroom, social science students from the same study, however, questioned the application of AI, and showed more reservations, especially toward the "ethical, social, and pedagogical implications of heavy reliance of AI in foreign language education" (Dolenc & Brumen, 2024). Findings from the study of Marrone et al. (2024) even pointed out that some students "expressed some fear and uncertainty in how AI may impact their skills" and also their "ability to enter the workforce." They also doubted that "as AI applications increase in complexity, the trust in the system diminishes" (Marrone et al., 2024).

Overall, while recent studies mainly discuss the use of AI in education from the viewpoint of educators, little is known about how students view it, and it is also not clear what factors they consider as its advantages and disadvantages. Due to these gaps in knowledge, this study set out to gain further understanding of the ways in which undergraduate students perceive and adopt AI, especially GenAI, as a part of their learning experience at Thu Dau Mot University. To reach this aim, three objectives are attained, including a) to investigate the GenAI programs that are used and the courses and models where students need the help from them; b) to analyze advantages and disadvantages of GenAI tools from students' perspectives; and c) to make suggestions regarding further research based on the relevant literature. In order to clarify these factors, two research questions were developed:

1. What are English-language undergraduates' perceptions regarding the benefits of using AI in learning?

2. What are English-language undergraduates' perceptions regarding the drawbacks of using AI in learning?

2. Methods

Aiming at investigating the perception of undergraduates towards the impacts of AI in their learning process, the authors employed the quantitative method for the descriptive, non-experimental research. This method was chosen since students are recently experienced with using AI as a tool to solve their various assignments with only a popular smart screen. They possibly perceive both gains and drawbacks properly during the application. Based on the recent work of Barrett and Pack (2023) and the framework of need analysis created by Dudley-Evans and St. John (1998), a four-section survey including 11 open and closed-ended questions was developed for the study.

The survey is divided into four sections, targeting both participants' positive and negative feedback about using AI in the learning journey. In the first part, students are asked to provide their general information, their basic knowledge of GenAI programs, the types of courses, the frequency, and learning models in which the GenAI programs are usually applied. In the second and third parts, the students were then asked to rate the benefits

and the drawbacks of using these GenAI programs. A five-point Likert scale was employed in the second and third sections, ranging from 'Strongly disagree' to 'Strongly agree.' Higher ratings (3, 4 or 5 on the scale) indicate strong performance or ability, while lower ratings (1 or 2) reflect weaker ones. Besides the 8 close-ended questions, the fourth part of the survey includes 3 open questions for exploiting more specific students' opinions about AI, which records participants' free thought. Email and the Zalo chat app (a popular electronic platform for communication in Vietnam) were used to transfer the survey to all students of English majors at Thu Dau Mot University regardless of the academic year in 2024.

193 undergraduates out of around 1500 students of the English language program voluntarily responded to the survey via Google Form for convenience. Particularly, there were 126 female students (65.3%), 59 male students (30.6%), and 8 students who chose not to disclose their gender (4.1%). 5.7% of them reported always using GenAI in their study, 38.3% often using it, and 56% sometimes using it. Data regarding participants' demographics is shown in Table 1 below.

TABLE 1. Participants' demographic information

Characteristic	**n**	**%**
Gender		
Female	126	65.3
Male	59	30.6
Prefer not to say	8	4.1
Academic year		
Freshmen	63	32.6
Sophomores	43	22.3
Juniors	28	14.5
Seniors	59	30.6
Frequency of use		
Always	11	5.7
Often	74	38.3
Sometimes	108	56
Rarely	0	0
Never	0	0

Despite the large population numbers, the number of samples ensures the level of representation based on Yamane's (1967) formula. 193 respondents accounted for around 93% of the population, with the error around 7% (see (1)). This means that the data from the 193 participants was random and unbiased.

$$e = \sqrt[2]{\frac{\frac{N}{n} - 1}{N}} = \sqrt[2]{\frac{\frac{1500}{193} - 1}{1500}} = 0.067\ (\approx 7\%) \qquad (1)$$

The collected data was then analyzed using SPSS 2.0 and others to point out the results of the above two research questions. Chronbach's alpha was analyzed to confirm the reliability of measurement, then mean and standard deviation were also calculated to compare the participants' perceptions on the gains and drawbacks, which are presented in tables and graphs. Tables 2-5 shows the consistency of data collected from the participants, and the Crobach's alpha = .891/.936 >.6 assures the reliability of the questionnaire, stating that the collected data is statistically meaningful.

TABLE 2. Reliability Statistics – Gains

Cronbach's alpha	Number of items
.936	14

TABLE 3. Items to measure participants' attitudes on gains from using AI tools

Item-Total Statistics

Statements	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AI tools help me complete academic work faster	47.11	88.128	.681	.932
Using AI tools improves the quality of my assignments and projects	47.28	88.534	.687	.932
AI tools help me in organizing and structuring my thoughts	47.32	87.783	.708	.931
I feel more confident about my work when I use AI tools	47.40	87.349	.728	.931
AI tools help me to understand complex topics better	47.11	88.940	.681	.932
AI tools increase my ability to manage my study time effectively	47.42	87.509	.652	.933
AI tools help me to improve my listening skill	47.73	87.192	.592	.936
AI tools help me to improve my reading skill	47.43	87.085	.720	.931
AI tools help me to improve my speaking skill	47.61	86.622	.681	.932
AI tools help me to improve my writing skill	47.15	88.017	.748	.930
AI tools help me with grammar	47.19	87.678	.723	.931
AI tools help me with vocabulary	47.12	87.825	.729	.931
AI tools help me with idea brainstorming	47.11	88.677	.690	.932
AI tools can improve my digital competence	47.35	87.887	.717	.931

TABLE 4. Reliability Statistics – Drawbacks

Cronbach's alpha	Number of items
.891	7

TABLE 5. Items to measure participants' attitudes on the drawbacks from using AI tools

Item-Total Statistics

Statements	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AI tools make me dependent on them for completing tasks	19.36	24.004	.653	.880
AI tools reduce my ability to think critically	19.46	22.892	.737	.869
AI tools make me more passive in my learning	19.27	24.353	.681	.876

AI tools negatively impacts my problem-solving skills	19.60	23.339	.678	.877
Relying on AI tools makes me less flexible in adapting to new situations	19.41	23.082	.738	.869
AI tools prevent me from fully engaging in the learning process	19.36	24.004	.653	.880
AI tools have negative impacts on learner autonomy and research ability	19.46	22.892	.737	.869

3. Results and Discussions

3.1. Popular AI tools and common subjects

Figures 1 and 2 describe the students' habit of using AI tools. In figure 1, it is shown that ChatGPT is the most popular type of AI tool among students, approximately 94%. While Gemini and Grammarly were also commonly used—63.2% and 55%—students paid less attention to Copilot and ELSA AI, 48% and 49%. The three most commonly used AI programs—including ChatGPT, Gemini, and Grammarly—fall under the generative AI category, which refers to different machine learning programs that can generate information by mimicking and learning from the existing dataset, providing mostly language tasks, including question answering, story composing, code generating, and essay writing (Kim et al., 2020). This possibly explains the data found in Figure 2, the types of modules in which most students need the help of AI tools. They are mainly reading and writing skills, as well as translation modules (which accounted for 71.5% and 62.2%, respectively).

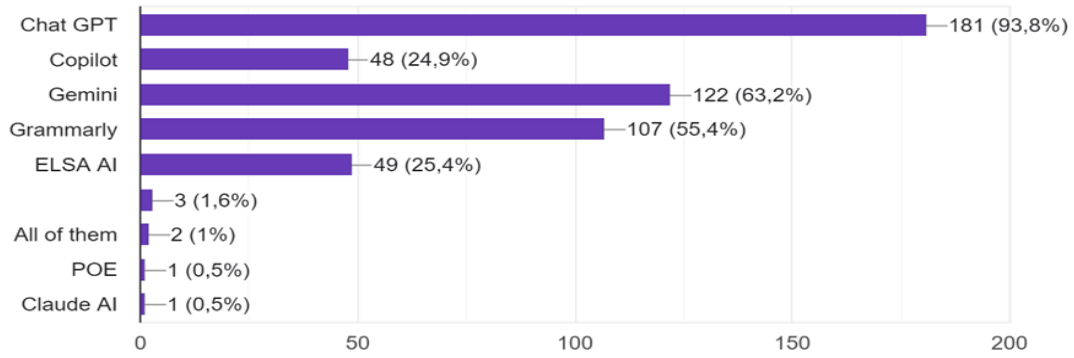


Figure 1. Commonly used AI tools.

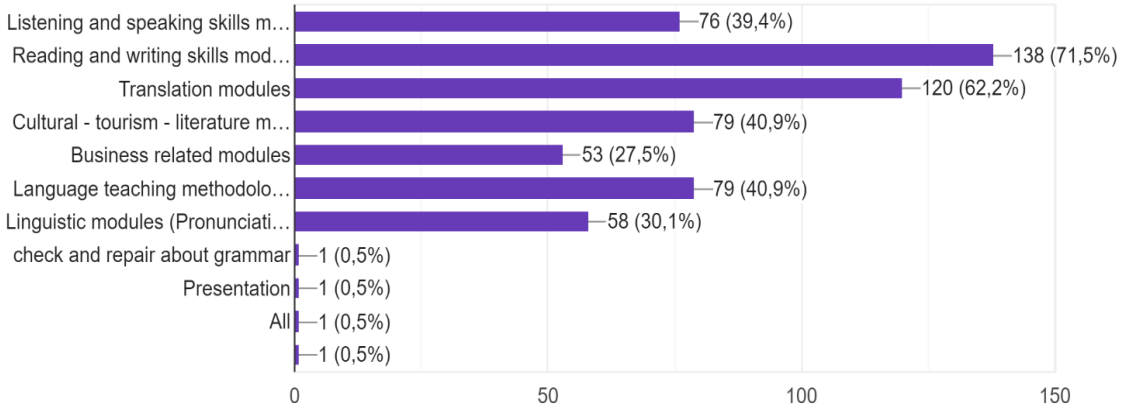


Figure 2. Types of subjects students use AI tools for

3.2. Benefits gained

Table 6 depicts that undergraduates consider AI quite useful in helping them with their academic performance as a whole, with an overall mean of 3.68. The participants voted that "*AI tools help me complete academic work faster"* with a mean of 3.85, which is consistent with a previous paper about the effectiveness of AI in students' performance by Chiu et al. (2023) . Other striking results falling on the four aspects of benefits are that "*AI tools help me to understand complex topics better*" (mean = 3.84; SD = .9), "*AI tools help me with idea brainstorming*" (mean = 3.85; SD = .9), *"AI tools help me with vocabulary*" (mean = 3.84; SD = .9), or "*AI tools help me to improve my writing skill"* (mean = 3.8; SD = .9). These results are persistent with the types of modules mentioned in Figure 2 - students need support from AI for learning activities of generating ideas or overcoming language barriers. Besides, the data also shows that AI assists the participants in organizing information, structuring their work, and enhancing the quality of their assignments with the means of 3.64, 3.54, and 3.68 one after another. However, one point worth noticing is that the improvement of both listening skills and speaking skills with the help of AI tools received the lowest rating (M = 3.22, SD = 1.16, and M = 3.34, SD = 1.07, respectively).

TABLE 6. Perceived benefits of AI.

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	M	SD
AI tools help me complete academic work faster.	55	70	56	8	4	3.85	0.95
Using AI tools improves the quality of my assignments and projects	40	67	74	8	4	3.68	0.92
AI tools help me in organizing and structuring my thoughts.	35	77	62	14	5	3.64	0.95
I feel more confident about my work when I use AI tools.	33	69	68	19	4	3.56	.96
AI tools help me to understand complex topics better.	48	80	55	7	3	3.84	.89
AI tools increase my ability to manage my study time effectively.	35	71	58	21	8	3.54	1.04
AI tools help me to improve my listening skill.	31	48	61	39	14	3.22	1.16
AI tools help me to improve my reading skill.	32	69	67	19	6	3.53	.98
AI tools help me to improve my speaking skill.	30	54	71	28	10	3.34	1.07
AI tools help me to improve my writing skill.	45	77	62	6	3	3.80	.89
AI tools help me with grammar	45	77	55	13	3	3.77	.94
AI tools help me with vocabulary	50	77	54	9	3	3.84	.92
AI tools help me with idea brainstorming	49	79	56	5	4	3.85	.90
AI tools can improve my digital competence.	32	75	70	10	6	3.61	.93
Overall mean						3.68	

For firmer exploration, Table 7 revealed thorough insights into students' perceived benefits regarding the use of AI tools. The participants generally agree that AI assists them in significant aspects like "*efficiency and time saving*," "*accessibility and convenience*,"

"*enhanced learning*," "*support in language learning*," and "*creative assistance*." Particularly, 41 out of the respondents highlighted how AI tools help complete tasks faster (e.g., homework, assignments, research); for example, **student 91** confirmed that AI helps them complete assignment faster. A clear parallel between data from this study and Neji et al. (2023) could be drawn based on both studies' findings, which indicate that the communication process between AI tools and users, as well as the response time, are enhanced. Along with these two aspects, students' academic performance was also believed to be improved since students can utilize the help of the GenAI program from the early stage of understanding their coursework, especially in conceptualizing the task assignment. **Respondent 88** stated that AI tools encourage continuous learning and skill development, making it easier for individuals to acquire new skills and knowledge throughout their lives. Furthermore, in line with the findings from Chan and Hu (2023), as well as Atlas (2023), in this study, GenAI is also a useful tool in creating a resourceful environment for both writing and brainstorming support, especially in feedback-giving for students' language use, grammar, and spelling, since those aspects are usually considered quite difficult for non-native English language students to master. 15.5% students agree that AI tools provide the availability of resources, instant feedback, and 24/7 support. Another finding was the way these results suggest that there is an association between the students' perceptions of two learning language skills, namely reading and writing skills. Since students find AI tools are good resources of knowledge and of great help in the cognitive process, they help with the improvement of their reading and writing skills. This is similar to the fact that a strong relationship between the reading and writing process therefore "draws a correlation between reading and writing proficiency," as remarked by Schoonen (2019). One unexpected finding was that 17 respondents noted that AI tools are helpful for generating creative ideas and organizing thoughts for presentations and projects, which has not been mentioned in previous papers.

TABLE 7. Student remarks on the benefits of AI.

Themes	General comments	Notable respondents	Respondents	Percentage
Efficiency and Time-Saving	Many respondents highlighted how AI tools help complete tasks faster (e.g., homework, assignments, research)	**Respondent 91**: "Help me complete my assignment faster."	41	21.2
Enhanced Learning	AI tools assist in brainstorming ideas, simplifying concepts, and offering personalized learning support.	**Respondent 88**: "AI tools encourage continuous learning and skill development, making it easier for individuals to acquire new skills and knowledge throughout their lives."	36	18.7
Accessibility and Convenience	AI tools provide the availability of resources, instant feedback, and 24/7 support	**Respondent 98:**"AI supports effective learning through personalization, 24/7 assistance, quick feedback, and simplified explanations."	30	15.5

Support in Language Learning	AI for aiding English learning, particularly in writing, reading, and improving skills like vocabulary and grammar.	**Respondent 52:**"AI help me in studying English very well, especially in writing and improving. It explains how to use this word, that word, in true ways and very clear."	24	12.4
Creative Assistance	AI tools helpful for generating creative ideas and organizing thoughts for presentations and projects	**Respondent 96:**"AI helps me have lots of interesting ideas."	17	8.8

3.3. Challenges faced

Quite similar to the benefits, Table 8 reveals that students' attitudes on drawbacks of using AI tools in studying are around the midpoint of the scale. This means they expressed only a slight favor of concern about the potential risk of GenAI. Predictedly, consideration for students' over-reliance on the tool itself (M = 3.35, SD = .98) and the possibility of losing the way to think critically (M = 3.36, SD = .94) were both the highest. The lowest rating of possible drawbacks related to students' learning engagement (M = 3.01, SD = 1.1). There is a quite large number of students choosing the neutral response for almost every perceived drawback, which means that respondents may be uncertain about the effect of the involvement of AI on their studying process.

Although many responses fall in the neutral midpoint (3.00), there is a small tendency to agree with the drawbacks of using GenAI tools. This suggests that although many users are quite uncertain, some still have made up their minds and tend to be worried about the issues. They include the overdependence on AI programs, the reduction of critical thinking ability, passivity, and lack of flexibility when they encounter a new academic task or real-life situation.

TABLE 8. Perceived drawbacks of AI.

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	M	SD
AI tools make me dependent on them for completing tasks.	26	55	79	27	6	3.35	.98
AI tools reduce my ability to think critically.	22	61	81	23	6	3.36	.94
AI tools make me more passive in my learning.	25	48	82	27	11	3.25	1.04
AI tools negatively impacts my problem-solving skills.	25	43	73	40	12	3.15	1.09
Relying on AI tools makes me less flexible in adapting to new situations.	22	60	81	23	7	3.35	.96
AI tools prevent me from fully engaging in the learning process.	18	44	72	40	19	3.01	1.10
AI tools have negative impacts on learner autonomy and research ability.	24	47	80	29	13	3.21	1.06
Overall mean						3.24	

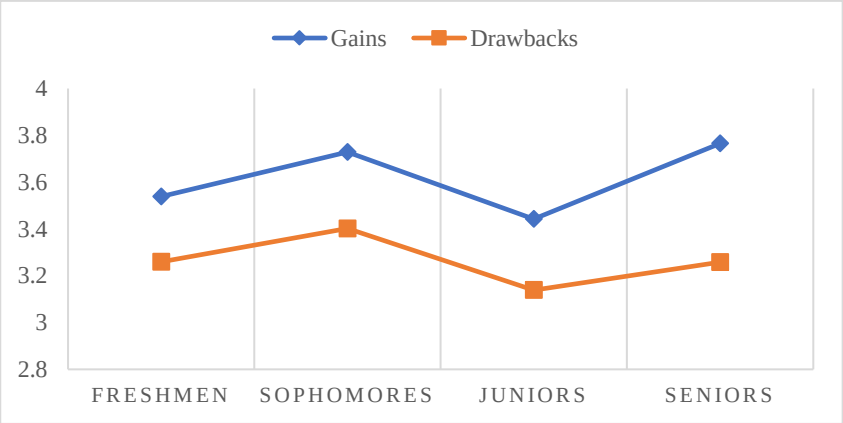
In the aspect of the second research question, certain cautions for the use of AI were also expressed. *Over-reliance on AI, reduced creativity and passivity, inaccuracy and lack of context* are the three significant drawbacks that concerned the participants. To begin with, over-reliance on AI programs means students may reach ready-made products generated by AI programs for their academic tasks instead of going through the process of self-study and independent research. In the long term, this "encourages a surface-level understanding rather than exploring the insights of the academic task," remarked one student in the response form. This result restated the one of Peres et al. (2023). Secondly, some students do care about the lack of context, which may lead to inaccurate answers provided by AI tools. One stated that "AI might encourage a surface-level understanding rather than deeper engagement with concepts. This may lack the nuanced understanding of a topic, leading to oversimplified explanations." This result reflects that of Peres et al. (2023) and Van Dis et al. (2023). Moreover, concerns for the privacy of users and ethical-related aspects of GenAI were also raised, since 17 students worried over data security and privacy of student information. This finding was not unexpected, since it was also reported in Dolenc and Brumen's (2024) study.

TABLE 9. Students' comments on the drawbacks of AI.

Themes	General comments	Notable respondents	Respondents	Percentage
Over-Reliance on AI	Leads to reduced critical thinking and problem-solving skills.Students rely on AI instead of engaging deeply with materials.	**Respondent 6**: "Drawbacks of AI tools in learning include the risk of over-reliance, which may reduce critical thinking and problem-solving skills. AI may lack the nuanced understanding of complex human emotions or specific contexts, leading to misinterpretations."	53	27.5
Reduced Creativity and Passivity	Encourages passivity by limiting original thought. Students struggle with generating new ideas without AI assistance.	**Respondent 126**: "It makes me reduce my ability to think critically, passive, and less flexible."	35	18.1
Inaccuracy and Lack of Context	AI can provide incorrect or oversimplified information. AI lacks the contextual understanding needed for complex tasks.	**Respondent 8**: "AI might encourage a surface-level understanding rather than deeper engagement with concepts. It may lack the nuanced understanding of a topic, leading to oversimplified explanations."	26	13.5
Accessibility and Cost Issues	Some tools require payments, limiting accessibility. Dependence on technology and internet access.	**Respondent 21**: "Some versions need a fee to use."	14	7.3
Privacy and Ethical Concerns	Concerns over data security and privacy of student information.	**Respondent 111**: "Privacy concerns arise when using AI, as students' data needs to be handled securely and responsibly."	17	8.8

Remarkably. Figure 3 illustrates a considerable finding that though overall "gains" mean scores of the four groups of participants are not completely high – just around 3.6, the "drawbacks" ones seem always lower in all of the relative participants' comments, approximately 3.24. Accordingly, participants agree that using AI causes some problems, but the gains they have always outweigh them to certain extent, which contributes to the main finding of the research.

Figure 3. Overall means of gains and drawbacks



Overall, findings from this study can be used for both formative and summative purposes in education, aligning with Arthur (2009), Burden (2008), and Emery et al. (2003). In other words, students' feedback and perception can be used to improve the effectiveness of teaching or even be used as part of the criteria to evaluate a course, thus shedding light on curriculum development and improvement—as in the case of summative purpose (Burden, 2008; Spooren et al., 2013). Thus, this combination of findings provides some implications that should be considered in integrating GenAI tools into education, especially in learning and teaching languages, or, in other words, how to deal with the involvement of AI in a language classroom. The use of AI is inevitable in the foreseeable future, so educational institutions should consider establishing clear and concise rules and regulations, as well as formal guidance on the use of GenAI. Brittain (2023), in an article in Reuters, mentioned that AI-created images "*are not the product of human authorship and therefore cannot be copyrighted.*" Therefore, AI-created written work, as part of AI-created products, should also be viewed in the same way as AI-created images so as to maintain the intellectual property of the creator and ensure the ethical standard in AI-related products. On a lower level, such as the setting of a single course in an undergraduate program, as suggested from the research findings, students tend to use AI in reading-related courses as well as writing-related courses. Therefore, the lecturers should also implement clear and consistent guidance on the use of AI Guide in reading skill or writing skill courses, not to mention limiting the use of AI in course assessment and course evaluation.

4. Conclusions and Recommendations

In conclusion, to exploit the trend of using AI as tools in learning journey among graduate students, the paper have explored the students' perceptions on the gains and drawbacks. The research respondents were particularly undergraduates of English-language program at Thu Dau Mot University, and only the answers of those who always, often, and

sometimes use AI were selected. The study reveals remarkable findings which are both consistent to the previous ones to some extent and contribute to the general picture of the issue in some way. First of all, the findings are not only in line with previous studies by Djokic et al. (2024) and Dolenc & Brumen (2024), but they also strengthen the idea that AI tools support students in better understanding complicated topics, brainstorming, and organizing, as well as giving feedback on students' grammar and vocabulary choices. All of which could improve the overall quality of their academic tasks, which is consistent to others (Kim et al., 2020), Marrone et al., 2024). This suggests that AI tools are considered valuable companions for students' learning process, from their first to the final year of tertiary education. Additionally, AI tools seem beneficial for improving specific skill sets, including reading, writing, and vocabulary expansion, translation, which are essential for their academic performance. This result notably shapes the popularity of AI in the function of breaking the language barrier. However, a majority of students claimed that repeatedly requesting AI assistance with their assignments could weaken their critical thinking skills and cause them to learn more passively. Therefore, it is safe to say that while GenAI is capable of improving students' productivity, skill development, and overall quality of their coursework, the overuse of them could also hinder the growth of students' adaptability, critical thinking, and problem-solving skills, which are essential in the cognitive development of undergraduate students. Overall, in terms of both the benefits and the drawbacks of using AI, the results from this study support those of the previous ones. Participants in this study acknowledged that there are drawbacks to employ AI, but the benefits themselves always exceed these drawbacks to some degree, which also supports the study's primary finding.

Regarding pedagogical implications, the findings from this study suggest that educational institutions and teachers should monitor the use of AI carefully, not to mention strictly, and create further AI awareness programs due to its effect on students' cognitive development. Education leaders can conduct further research on student's understanding and familiarity with AI. Based on the findings of these results, institutions can provide different modules and courses on understanding AI principles, commanding AI chatboxes via prompts, and applying AI to the student studying process appropriately.

The limitation of this study mainly includes the information bias due to its small-scale nature, as well as its failure to consider the dynamic nature of students' perceptions. First of all, the data was collected on the basis of students' subjective measures rather than the objective measure of their academic performance. This means that while students may feel that their overall academic outcome can be improved with the help of AI programs, there is neither an objective assessment tool nor an objective dataset to record and compare students' results with and without the help of GenAI programs. Further research, therefore, can take this matter into consideration to develop an objective assessment method to confirm AI effectiveness. Secondly, along with the advancement of technology, students' perceptions may change as they become more aware and familiar with the use of GenAI. Thus, there is still a need for a longitudinal dataset to fully evaluate students' attitudes towards the drawbacks and benefits of the use of AI in their learning process.

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