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The 21st AsiaCALL International Conference is scheduled to take place at the esteemed Industrial University of Ho Chi Minh City in Vietnam, from November 23 to 24, 2024, No. 12 Nguyen Van Bao, Ward 4, Go Vap District, Ho Chi Minh City.

The AsiaCALL2024 received 184 abstract submissions of 347 authors from 19 different countries, including UK, Bangladesh, Canada, India, Australia, USA, Taiwan, South Korea, Singapore, China, Finland, Japan, Indonesia, Bosnia and Herzegovina, India, Hongkong (China), Malaysia, Cambodia, Brunei, and Vietnam.

This transformative event a good chance for us to get together to share our research and experience, especially AI in language teaching and learning.

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Table of Content

Integrating AI Tools for Personalized Language Instruction

<i>Articles</i>	<i>Pages</i>
1. Complaining as a face-threatening act: A look into AI complaints DOI: https://doi.org/10.54855/paic.2461 Le Huu Loc	1-19
2. Teachers' Perspectives on AI-Driven Quizzionz for Generating EFL Reading Comprehension Quizzes DOI: https://doi.org/10.54855/paic.2462 Nguyen Thi Luong, Nguyen Hai Linh, Le Duc Hanh	20-34
3. Perceptions of Postgraduates Towards Using Citation Management Software in Academic Writing: A Case Study in a Vietnamese University DOI: https://doi.org/10.54855/paic.2463 Nguyen Hai Linh, Nguyen Thi Luong, Pham Thuy Quynh, Le Duc Hanh	35-53
4. Genre Analysis of Law Research Article Abstracts and Application in Legal Writing Teaching DOI: https://doi.org/10.54855/paic.2464 Nguyen Thi Nhat Linh	54-70
5. Decoding Scholarcy website: A Study on its Research Summarization Efficiency DOI: https://doi.org/10.54855/paic.2465 Bui Thi Xuan Huong, Bui Van Hieu	71-80
6. Using Grammarly in Enhancing Students' Grammatical Accuracy in English Writing: A Case at a Private College in Hanoi DOI: https://doi.org/10.54855/paic.2466 Vu Phuong Thao	81-96
7. The Impact of Computer-Based Activities and Non-Computer-Based Activities on College Students' Learning Engagement in English Lessons DOI: https://doi.org/10.54855/paic.2467 Mai Thi Dinh	97-111
8. Vietnamese College Students' Perception Towards Using TikTok for Independent English Speaking Practice DOI: https://doi.org/10.54855/paic.2468 Ngo Thanh Tam	112-122
9. An Investigation into Third-Year Students' Perceptions of the First English Teaching Practice DOI: https://doi.org/10.54855/paic.2469 Tran Kieu My An	123-132



Table of Content

Integrating AI Tools for Personalized Language Instruction

<i>Articles</i>	<i>Pages</i>
10. The Use of Electronic Mind Maps to Develop EFL Students' Vocabulary DOI: https://doi.org/10.54855/paic.24610 Tran Thi Nam Phuong, Ngo Thi Bich Ngoc, Nguyen Thi Hanh Phuc	133-143
11. Examining English-Majored Students' Performance and Attitudes towards ChatGPT and an Online Dictionary for Lookup DOI: https://doi.org/10.54855/paic.24611 Mai Hoang Viet, Tran The Phi	144-156
12. Evaluating HUFLIT Lecturers' Perspectives on ChatGPT's Capabilities in Designing English Testing and Assessment DOI: https://doi.org/10.54855/paic.24612 Le Thi Thu Huong	157-181
13. Investigating Learners' Perspectives on ELSA Speak Integration to Enhance Autonomy and Oral Language Proficiency in English Classes DOI: https://doi.org/10.54855/paic.24613 Tran Dang Khoi, Vu Thi Kim Chi	182-192
14. Utilizing ChatGPT in checking academic writing for postgraduate students DOI: https://doi.org/10.54855/paic.24614 Duong Ngoc Han, Tong Thi Mai Huong, Le Duc Hanh	193-203
15. The realization of thematic progression in argumentative essays by third-year English-majored students at a public university in Vietnam DOI: https://doi.org/10.54855/paic.24615 Pham Phuc Thanh	204-216
16. Exploring the Impact of Mobile-Assisted Language Learning (MALL) on the Autonomous English Learning of EFL Sophomores: A Case Study DOI: https://doi.org/10.54855/paic.24616 Nguyen Thi Diem Thi	217-237
17. Utilizing Artificial Intelligence in Writing Feedback: Benefits and Challenges for First-Year Students at Hanoi University of Industry DOI: https://doi.org/10.54855/paic.24617 Duong Thi Kim Hue, Le Thi Thu Huong	238-249
18. Integrating TPACK to Enhance Quality Assurance in General English Teaching: A Case Study in Higher Education DOI: https://doi.org/10.54855/paic.24618 Quach Thi To Nu, Le Van Can, Pham Thi Xuan Trinh, Pham Phong Phu, Nguyen Thi Thanh Xuan	250-267

Table of Content

Integrating AI Tools for Personalized Language Instruction

<i>Articles</i>	<i>Pages</i>
19. Exploring Vocational Students' Perceptions Towards Language Hub in Enhancing Autonomy DOI: https://doi.org/10.54855/paic.24619 Ho Khanh Huyen, Hoang Thi Hoai	268-279
20. Students' Perceptions of the Effect of Blended Learning on their Learning Autonomy DOI: https://doi.org/10.54855/paic.24620 Phan Thi Ngoc Le	280-293
21. An Investigation into Students' Perceptions of Creating Student-generated Digital Videos in PBL at Saigon University DOI: https://doi.org/10.54855/paic.24621 Nguyen Hoang Thanh Tam, Dang Vu Minh Thu, Vu Thi Kim Chi	294-309
22. An Investigation into Students' Perceptions of Using Padlet as a Discussion Board at Saigon University DOI: https://doi.org/10.54855/paic.24622 Vu Thi Kim Chi, Nguyen Hoang Thanh Tam, Dang Vu Minh Thu	310-324
23. Empirical Research Trends in the Use of AI Chatbots in EFL Teaching and Learning in Vietnam: A Systematic Review DOI: https://doi.org/10.54855/paic.24623 Dang Thi Phuong	325-343
24. An Investigation into Students' Perception of Using Call Annie as a Virtual Conversational Partner DOI: https://doi.org/10.54855/paic.24624 Nguyen Lam Anh Duong, Dang Vu Minh Thu, Le Mai Thy	344-364
25. Practice Report: On the development of medical English ESP learning model via VR space in collaboration with Finland DOI: https://doi.org/10.54855/paic.24625 Iwao Yamashita, Kari Vehmaskoski	365-375
26. Students' Perception of the Effects of Using Self-assessment and Peer-assessment in Promoting Learner Autonomy in Speaking Skills DOI: https://doi.org/10.54855/paic.24626 Phan Thi Minh Thao	376-390

A Note from the Editor-in-Chief

Dear AsiaCALLers,

We are delighted to announce the successful publication of Proceedings of the AsiaCALL International, Vol. 6 (2024): Integrating AI Tools for Personalized Language Instruction. This volume represents the collective efforts of researchers and educators dedicated to exploring the integration of artificial intelligence in language teaching and learning.

The 21st AsiaCALL International Conference, held on November 23–24, 2024, at the Industrial University of Ho Chi Minh City, Vietnam, was an outstanding success. The event brought together scholars from across the globe, fostering meaningful discussions and collaborations on the latest advancements in AI-powered language education. With 184 abstract submissions from 347 authors representing 19 countries, the conference highlighted the diversity and richness of research in our field.

We extend our deepest gratitude to the authors for their insightful contributions, the reviewers for their meticulous evaluations, and the editorial team for their dedication to ensuring the quality and integrity of this publication. Your efforts have been instrumental in making this volume a valuable resource for the academic community.

Thank you for your continued support of AsiaCALL, and we look forward to future collaborations in advancing research and innovation in language education.

Warm regards,

Associate Professor Dr. Pham Vu Phi Ho
Professor Dr. Jeremy White
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Complaining as a face-threatening act: A look into AI complaints

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ABSTRACT

Keywords: ChatGPT, complaining, face-threatening, politeness, speech act

This paper aims to conduct an analysis of the complaints as provided by an AI tool, ChatGPT. First, an overview of complaining speech act as a face-threatening act is provided regarding the multiple ways how it is defined and classified, as well as its relation to directness levels. Second, the complaining-realizing strategies with a wide range of modification devices have been summarized and applied as frameworks for scrutinizing AI complaints. Third, the perusal of the complaints gathered from ChatGPT indicates its general adherence to the three-part structure of complaining set, Buffer, Complaint, and Negotiation. The analysis also recorded the implementation of modification tools to show concerns for the interlocutors' faces.

Introduction to complaining

As defined by the Oxford Dictionary, “complain” is “to say that you are annoyed, unhappy or not satisfied about somebody/something” (Oxford University Press, n.d.), whereas the Cambridge Dictionary determines “complain” as “to say that something is wrong or not satisfactory” (Cambridge University Press, n.d.-a), and “complaining” as “the act of saying that something is wrong or not satisfactory” (Cambridge University Press, n.d.-b). It can be seen from the definitions that “complain” is to express one’s disapproval towards someone or something that does not meet one’s expectations or leads to damaging consequences. In general, “complaining” can be expounded as a speech act in which the speaker voices their dissatisfaction towards unsatisfactory or erroneous states of affairs.

Definitions of complaining normally revolve around the notion of “expectation” as suggested in the work by Olshtain and Weinbach (1987, p. 195). They characterize a complaint as a product when an interlocutor (complainant) anticipates a positive outcome to take place or a negative outcome to be avoided, and those expectations are somehow not met, the hearer (the complaine) is typically the one who should be held accountable for having “enabled or failed to prevent the offensive event”. In a later work, (Olshtain & Weinbach, 1993), complaining is specified as the speech act that occurs when

the speaker (S) expresses displeasure or annoyance-censure-as a reaction to a past or ongoing action, the consequences of which are perceived by S as affecting her unfavorably. This complaint is usually addressed to the hearer (H) whom the S holds, at least partially, responsible for the offensive action. (Olshtain & Weinbach, 1993, p. 108)

As complaining is a response to a “socially undesirable behavior”, which is a prerequisite to the complaint, its feature of justifiability is also highlighted (Olshtain & Weinbach, 1993). According to Trosborg (1995, p. 311), complaining is backward-looking as in this speech act, “a speaker passes a moral judgment on something which (he/she believes) the complainee has already done or failed to do, or is in the process of doing”. She continues to clarify that complaining is an illocution in which the displeasure and negative emotions, and so on are displayed by the complainant (the speaker) in the direction of the complainable, and for which the complainee (the hearer) assumes the responsibility in a direct or indirect manner. Similarly, complaining is viewed as “an expression of dissatisfaction addressed by an individual A to an individual B concerning behavior on the part of B that A feels is unsatisfactory” (Laforest, 2002, p. 1596). More concretely, person B, who is accountable for the unsatisfactory behavior, is regarded as the issue’s root cause. As elaborated by Laforest (2002, p. 1596), unsatisfactory behavior is the conduct that deviates from social norms and does not live up to the complainer’s expectations for his or her engagement with the complainee, and “failure to meet expectations is a precondition for the implementation of the act of complaining”.

Heinemann and Traverso (2009, p. 2383) state that “almost any turn-at-talk that reports something with even the slightest negative valence can be taken by a recipient as being complaint implicative”. Nevertheless, as Edwards (2005) clarifies the speakers may counter to the belief that they are making complaints, “rather than simply reporting some observations” (2005, p. 7). He continues to explain that as a complaint entails some form of “grievance,” anything that a speaker would attempt to downplay – such as any form of prompted or attitudinal foundation for what they are claiming – becomes readily significant. (Edwards, 2005, p. 7). In the same vein, Sacks (1995, p. 359) justifies that a complaint is normally comprised of “a piece of praise plus ‘but’ plus something else”, where it is frequently not immediately clear that a complaint has been made. In other words, if it were on its own, it would not be a complaint. Wierzbicka (2003, p. 181) characterizes complaining as “verbal”, “fully intentional” and indicating “something bad” happening to the speaker. However, for this characterization, the connection between the complainee and the activity that is being complained about is still left unclear.

It can be acknowledged that complaining is an indication of dissatisfaction. However, dissatisfaction does not necessarily imply that the speaker is dissatisfied; it can be “a strategy employed to achieve some desired goal” (Kowalski, 2003, p. 28). In fact, complaining can be deemed an expression of discontent, whether or not it is subjectively felt, performed to discharge sentiments, or attain goals, interpersonally or intrapsychically, or both. (ibid.)

Olshtain and Cohen (1981) observe that speech acts are not normally produced alone; instead, they are incorporated into “speech act sets” or speech act formulas. This idea of a “speech act set” relates to the fact that each speech act can be created by having two or more discourse

strategies integrated, some of which may represent different types of speech acts. To illustrate, a complaint can be “*The food in the restaurant was dreadful* [complaining]”; nevertheless, it can also take the form of a bigger “speech act set,” as displayed in this instance “*The restaurant’s food was really terrible. Stay away and find another place to eat.* [Complaining and Suggesting]. (Vásquez, 2011, p. 1708). Likewise, Murphy and Neu (1996) provide further explanations as follows:

A speech act set is a combination of speech acts that, taken together, make up a complete speech act. That is, it is often the case that one utterance alone does not perform a speech act. Some examples are apologies and invitations where several utterances are necessary for the intended illocutionary act to be accomplished. (1996, p. 214)

Complaining categorization

As stated by Decock and Depraetere (2018, p. 34), regarding the investigation of complaints’ directness, the terms “directness” and “indirectness” are employed in most complaint research to indicate linguistic variations (i.e., how is the complaint worded?) and the politeness impact.

Boxer (2010) provides a distinction between “direct complaint” (DC) and “indirect complaint” (IC). Specifically, a DC can be considered a complaint filed towards the interlocutor who is either thought to be at fault for the transgression or who is in a position to fix it. When it is expected or regarded as appropriate given the setting, one is heard to exclaim DC (Boxer, 2010, p. 164). Phrased another way, DCs are viewed as unfavorable conclusions made about the complainee responsible for the complainable (e.g., complaining regarding the poor quality of service to customer care) (Olshtain & Weinbach, 1993). On the other hand, IC is addressed towards a person who is neither accountable for the offense nor in charge of fixing it. It is sometimes possible for ICs to be considered similar to “griping”, “grumbling”, or even “bitching” or “bellyaching”, which are colloquial expressions and groups with similar semantic content. (Boxer, 2010, p. 165). In other words, IC, or trouble sharing, entails passing judgment negatively on an unfavorable event to an outsider who is not held accountable for it (e.g., complaining made to a classmate about their teacher) (Boxer, 1993). In contrast to DCs, which are typically made to face an issue with the goal of having it resolved (Brown & Levinson, 1987), ICs are frequently made to express frustration and secure agreement (Boxer, 1993).

Thus, the distinction made by Boxer (Boxer, 2010, pp. 164–165) pertains to variations in the complaint scenario concerning the “participation framework”, revolving around who is present at the time of a complaint. However, this differentiation has been questioned by some researchers. For instance, although the complaint’s direct recipient is another person or “third party,” as Heinemann (2009) noted, in some ICs, it is possible for the party responsible for the behavior to be available in person during the interaction. As the research has mostly focused on complaints in spoken conversations, Vásquez (2011, p. 1709) raises doubts about the cases of online complaints. Cases of complaints made online via various forms of computer-mediated communication (CMC) where participants are frequently not co-available, that is, occupying an identical physical location, should be taken into account. Phrased another way, it is doubtful whether internet complaints typically take a direct or indirect approach.

Marian et al. (2023, p. 127) demonstrate that “the distinction between direct and indirect complaints is not always clear at the onset, but, rather, it is negotiated *in situ* by the participants.” [original italics emphasis]. They also propose another category of complaints, which is that of “hybrid complaints”. In their study, hybrid complaints are the cases when clients complain about problems that are not directly connected to the service but for which there is some doubt as to who is to blame for the problems. In contrast to direct complaints where the complainant accuses the recipient directly, this sequence concerns inclinations toward the likelihood of assigning fault and accountability. Hybrid complaints are viewed as “the kind of interactional work participants do in order not to end up in direct complaints, or to transform potentially direct ones into indirect ones” (2023, p. 136).

Another way of viewing directness and indirectness is suggested by Decock and Depraetere (2018) as when they reassess the two notions, they “are not referring to Boxer’s distinction, but to work on complaints which uses these terms to describe linguistic features of complaints” (p. 34). They claim that the clarification of the “directness” and “indirectness” concepts is conducted with the interactional approach taken into account to categorize and taxonomize them in a clear and useful manner. This entails being precise about the aspects the labels cover and outlining how they relate to politeness. The ultimate goal is to create a practical tool that enables comprehensive analysis of various speech acts across languages from the angles of “directness” and “indirectness” (ibid., p. 34).

The face threat of complaining

According to Henry and Ho (2010, p. 841) complaining belongs to the kind of acts that “exhibit, consciously and unconsciously, the psychological state of the aggrieved party”. Therefore, one of the major characteristics of complaining is that it is an act that can threaten the interlocutor’s face (Chen et al., 2011, p. 255). In fact, the speaker’s unfavorable perception regarding the recipient and ethical assessment endangers the hearer’s “positive face” with the desire to be respected or valued. Additionally, when a complaint is coupled with a demand for compensation, it often presents a risk to the addressee’s “negative face” with the urge to be “free from imposition” (Brown & Levinson, 1987).

Because a direct complaint entails an outright incongruence by indicating the complainer’s unhappiness and discontentment with the addressee’s unwanted behavior, it can harm his/her “positive face” as seen from the standpoint of Anglo-Saxon culture (Minh & Thuy, 2021, p. 44). An IC, on the one hand, is made in an effort to find common ground and may therefore really contribute to fostering unity and fortifying social ties (Boxer, 1993). However, ICs can also threaten the speaker’s “positive face”. The complainant runs the danger of coming across as unkind or devoid of empathy by providing unfavorable judgments. (Kozlova, 2004). Besides, Kozlova (2004, pp. 86–87) also suggests that ICs can ruin the recipient’s “negative face” as they can be characterized as the acts in which the speakers “predicate some future act A of H [the hearers], and in so doing put some pressure on H to do (or refrain from doing) the act A” (Brown & Levinson, 1987, p. 66). To fulfill the recipient’s wish “not to be impinged on” (Brown & Levinson, 1987), the speaker can demonstrate his/her concern for the hearer’s desires by employing negative politeness strategies.

Leech (1983, p. 104) categorizes the speech events according to four groups, including “competitive”, “convivial”, “collaborative”, and “conflictive” regarding the relationship between the illocutionary goal and the social goal of preserving respect and equilibrium between the speaker and the hearer. Complaining is a member of the “conflictive” group, where the illocutionary goal conflicts with the social goal. He elaborates that while the first two types concern politeness, the other two do not. Therefore, as regards the conflictive functions, “politeness is out of the question” and “to threaten or curse someone in a polite manner is virtually a contradiction in terms” (Leech, 1983, p. 105). As a result, discussing mitigating factors concerning the act of filing a complaint seems to be somewhat paradoxical. Nevertheless, the need for such tactics to prevent interpersonal communication disputes is evident. (Trosborg, 1995, p. 312).

Complaining and directness levels

As suggested by Chen et al. (2011, p. 255), “complaint can be addressed at different directness levels”. They provide a further explanation that based on the three factors – social distance (D), relative power (P), and ranking of imposition (R), a sensible complainant will determine the severity of such a face-threatening act (Brown & Levinson, 1987). On that basis, the complainant relies on this assessment to decide upon choosing not to complain, complain “bald-on-record”, or complain with “redressive actions” (Olshtain & Weinbach, 1993). Indeed, the choices are made by adopting a specific course for making decisions (Brown & Levinson, 1987, p. 60). Regarding complaining, the set of decisions is actually made in a series of considerations for payoffs. To be more concrete, if the complainant decides to take remedial action, his or her choices can be either positive or negative in terms of politeness. A speaker who chooses a positive politeness orientation would presumably still choose to explicitly address both the socially unacceptable behavior and the hearer while also expressing some shared concern and empathy, which reduces the offense. On the other hand, the approach to carrying out complaining may manifest as a toned-down statement if the decision is negative politeness-focused. These mitigated tactics might be implemented as a typical request for repairs, if necessary, or as a remark that refers to the socially unacceptable behavior but does not address the hearer specifically. Even when the complaint is made directly, it appears that in the negative politeness orientation, mitigation may reduce the peril and diminish the impact on the compensation. (Olshtain & Weinbach, 1993, pp. 109–110).

Similarly, Trosborg (1995, pp. 312–313) claims that although filing a complaint is inherently an impolite act, there are mitigating devices that a complainant might employ to alleviate the impacts of the complaint on the complaine. She goes on to explain that there are various options available if the complainer wants to avoid the complaine’s face-to-face confrontation.

According to Decock & Depraetere (2018, p. 34), the dichotomy between “direct” and “indirect” strategies and/or the separation between various levels of “directness” is a common foundation for taxonomies of speech act realization techniques. Without drawing a clear differentiation between “direct” and “indirect” techniques, complaint realization tactics have traditionally been characterized using a directness scale. Two notable measures of directness in the study of complaints are the one created by House and Kasper (1981) in their work on complaining and requesting in English and German, and the other by Trosborg (1995) in her

study on complaining, requesting, and apologizing in English by native and non-native speakers. In detail, House and Kasper (1981) suggest an eight-level scale of indirectness-directness on which eight strategies of complaining are placed, ranging from the complainer's implying of the offense to his/her explicit assertion of the complainable and the complaine'e's wrongdoing. Similarly, Trosborg (1995) summarizes four major complaint strategies, encompassing "no explicit reproach", "expression of annoyance or disapproval", "accusation" and "blame".

Semantic formulae of complaining

Another way of examining the complaining speech act is by analyzing its constituents, which are incorporated in creating a complaint. Phrased another way, these elements can also be considered the complaining realizing strategies.

It is testified by Cohen and Olshtain (1981) that speech acts are normally not formed independently; instead, they are established as a component of "speech act sets" or speech act formulas/ semantic formulae. A "speech act set" is the potential of creating an individual speech act through the combination of several speech acts, some of which may be associated with multiple kinds of speech acts. In a similar fashion, Murphy and Neu (1996) provide more support for the speech act set phenomenon when they observe that "it is often the case that one utterance alone does not perform a speech act" (1996, p. 214).

Schaefer (1982) offers nine categories based on the semantic formulae of complaints. These categories include "opener", "orientation", "act statement", "justification of the speaker" "justification of the addressee", "remedy", "threat", "closing" and "valuation" (1982, pp. 14–15)

In their investigation into the speech acts of complaining as performed by Korean learners of English and native American English speakers, Murphy and Neu (1996) bring to light four kinds of complaining formulae, namely "an explanation of purpose", "a complaint", "a justification" and "a candidate solution: request".

For the purpose of categorizing complaint realizations in business letters of complaint delivered by Korean and American executives, Park et al. (1998) adopt the framework of semantic formulae which embrace the components, including "identification of the problem", "discussion of relevant information", "request for action", "topic shift", and "buffer".

More recently, Zhang (2011) states that a complaint is made up of six semantic portions: an opener, an orientation, a justification, a remedy, an act statement, a closing, and an opener. Both the "act statement" and "remedy" components out of the six are seen to be highly significant. There are three possibilities to incorporate the two crucial elements of a complaint: (1) merging the act statement and remedy; (2) employing the act statement solely; and (3) adopting the remedy independently.

To be more concise, Rhurakvit (2011) segments complaints into three primary tactics: buffer [B], complaint [C], and negotiation [N]. These three strategies are subsequently further split into fourteen sub-strategies. The strategies and sub-strategies of complaining are illustrated in Table 1.

Table 1.

Semantic formulae of complaining (Rhurakvit, 2011, pp. 67–68)

Speech act set of Complaining	
Strategies	Sub-strategies
(1) Buffer [B]	B1. Apologizing as a Negative Politeness Device B2. Complimenting B3. Greeting B4. Thanking B5. Forgiving B6. Provision of Context
(2) Complaint [C]	C1. Expression of Disappointment C2. Direct Complaint C3. Negative Assessment C4. Using Irony C5. Challenging C6. Warning or Threat
(3) Negotiation [N]	N1. Suggestion N2. Request for Repair

It can be seen that the taxonomy as proposed by Rhurakvit (2011) clearly characterizes the three common components of a complaint act, with the complaint being the head, surrounded by the buffers and negotiations. These bordering elements can function as “supportive moves” supplementing backup for the head act of complaint. These are also considered “external modifications” (Kraft & Geluykens, 2002; Tamanaha, 2003; Sato, 2010; Meisl, 2010) serving to supplement backup for the complaining act to be effectively carried out. Furthermore, according to Meisl (2010), wielding these external modification devices displays the speaker’s “concern for the hearer’s face” (2010, pp. 16–17).

Internal modification for complaining

House and Kasper (1981) assert that the quantity and type of “modality markers” found in an utterance can have a significant impact on the perceived “politeness” of that utterance (1981, p. 166). Consistent with this perspective, Trosborg (1995) maintains that “one and the same directness level of a complaint may involve disparate face-threats dependent on the inclusion of modifiers in terms of modality markers” (1995, p. 327) These modality markers can be classified as “downgraders” and “upgraders”. While “downgraders” assist in alleviating the conditions that led to the offense taking place and, as a result, lessen the amount of responsibility that can be placed on the complainant, whereas “upgraders” exacerbate the offense and consequently amplify the possible adverse effects of the complaint on the complaine. (1995, p. 327). Alternatively stated, while the presence of downgraders can soothe or lessen the impact of a complaint, the insertion of upgraders could escalate or reinforce it.

The modality markers employed can function as internal modifiers to soften or aggravate the effect of the complaining act, which in turn creates disparate politeness effects in exchanges. It should be noted that, as for the speech act set of complaining, the internal modifiers can occur not only in the complaint [C] but also in the supportive moves of buffer [B] and negotiation [N]. A detailed demonstration of internal modification devices can be found in Table 2.

Table 2.

Modality markers as internal modifiers (DeCapua, 1989; House & Kasper, 1981; Trosborg, 1995; Yang, 2016)

Modality markers (Internal modifiers)		Functions	Examples
Downgraders [D]	D1. Politeness markers (usually words)	to display respectfulness to the Hearer (H) or to invite H's cooperation	<i>please, help, for me</i>
	D2. Play-downs (syntactical devices)	to minimize the perlocutionary impact a statement is anticipated to exert on the H	<u>past tense</u> <i>I wondered if...</i> <u>durative aspect marker</u> <i>I was wondering if</i> <u>negation</u> <i>Mightn't it be a good idea...</i> <u>interrogative sentence</u> <i>Mightn't it be a good idea?</i> <u>modal</u> <i>Mightn't</i>
	D3. Consultative devices	to engage H and solicit H's cooperation.	<i>Would you mind if ...?, Do you know...?, I wonder if..., Could I...?, Can I...?, Can we...?</i>
	D4. Hedges (adverbials)	to refrain from detailed specifications	<i>kind of, sort of, somehow, and so on, and what have you, more or less, rather, some, a while, look, suggest, seem</i>
	D5. Downtoners (sentence modifiers)	to diminish the influence of the utterance	<i>just, simply, possibly, perhaps, rather, maybe, possibility, may</i>
	D6. Minus committers (sentence modifiers)	to indicate that the speech is the S's individual point of view.	<i>I think, I guess, I believe, I suppose, in my opinion, I'm afraid</i>
	D7. Agent avoiders (syntactic devices)	to avoid a confrontation by leaving out the S or H	passive, (imperative) impersonal constructions applying neutral agents, such as <i>people, they, one, you</i>
	D8. Cajolers	to enhance, construct, or preserve consensus between S and H	<i>you know, you see, I mean</i>
	D9. Appealers	to call upon the H's understanding, induce an indication from the H	<i>okay, right, don't you think?</i>
	D10. Understaters (adverbial modifiers)	to understate the present situation of affairs	<i>a little bit, a second, not very much, just a trifle</i>
	D11. Hesitators	to signify irresolution	<i>erm, er, uh,</i>
	D12. Scope-staters	to represent S's personal perception regarding the current state of circumstances.	<i>I'm afraid you're in my seat; I'm a bit disappointed that you...; I'm not happy about the fact</i>

Modality markers (Internal modifiers)	Functions	Examples	
		<i>that you...</i>	
D13. Forewarners (disarmament devices)	to notify H to forestall H's unwanted responses.	<i>far be it from me to belittle your efforts, but..., you're a nice guy, Jim, but..., this may be a bit boring to you, but ...</i>	
Upgraders [U]	U1. Exclamations	to display S' intense emotions	<i>Oh no, Oh my god</i>
	U2. Overstaters (adverbial modifiers)	to overstate the actuality indicated in the remark	<i>absolutely, purely, terribly, frightfully, horribly, always</i>
	U3. Intensifiers (adverbial modifiers)	to intensify particular components of the utterance	<i>very, so, such, quite, really, just, indeed,</i>
	U4. Plus committers (sentence modifiers)	to convey S's profound commitment to the state of affairs.	<i>I'm sure, I'm certain, I'm positive, it's obvious, surely, certainly, positively, obviously, unfortunately</i>
	U5. Lexical intensifier (semantic words)	to mark the S's strongly negative attitude	<u>swear words</u> <i>bloody, stupid, damn, idiot, fuck, ass, the hell</i>
	U6. Aggressive interrogatives	to overtly include the H, and increase the effect of the S's speech on H.	<i>Why haven't you informed me in advance?, Why, Are you kidding?, Are you serious?, What happened?</i>
	U7. Rhetorical appeals	to deter H from refusing to endorse the current situation.	<i>You must understand that..., anyone can see that..., it's common knowledge...</i>

An analysis of AI complaints

AI in English language education settings has been found to cut both ways, which has been claimed by Sienes & Sarsale (2024) to not only bring about enormous offerings to educational advancement, but also trigger “professional and ethical threats to the students, the teachers, and the teaching-learning process” (2024, p. 37). There have been quite a lot of studies on the applicability of AI tools in general and ChatGPT in particular in the language teaching and learning processes, ranging from those centering on the teachers' evaluations concerning employing the tools in language assessment and teaching (Chi, 2024; Yen et al., 2024), coupling with those focusing on utilizing the tools in test design (Thao, 2023), in teaching language skills (Hien, 2024), in relating to a specific teaching approach (Tuyen et al., 2024) or in generally sharpening learners' digital capacity (Nghì & Phuc, 2023). However, research on the employment of AI tools in studying linguistics has remained an under-researched matter.

This part is devoted to presenting our scrutinization of complaints as filed by AI regarding the two aspects, (1) the semantic formulae and (2) the internal modification as depicted in **Table 1** and Table 2. The purpose is to examine whether the complaints made by AI adhere to the frameworks as drawn upon from the literature review.

The AI tool employed is ChatGPT-4o mini (<https://chatgpt.com>) which was required to carefully read and supply what it normally says to make a verbal complaint for the ten situations. The ten complaint-triggered scenarios in the field of hospitality and the

correspondent complaints are demonstrated in Table 3, with the situations being marked from S1 to S10, and the complaints being coded from CR1 to CR10.

Table 3.

Complaints by ChatGPT in each situation

Scenarios	Complaints by ChatGPT
S1. The bed is unmade and the bathroom is messy	CR1. "Hello, I just checked into my room, and I noticed that the bed is unmade and the bathroom is quite messy. Could you please arrange for housekeeping to take care of this as soon as possible?"
S2. The dish served is not the one ordered	CR2. "Excuse me, I received a dish that I didn't order. I had asked for [name of the dish you ordered]. Could you please check on this and bring me the correct order?"
S3. The electric water heater is not working	CR3. "Hi, I'm having trouble with the electric water heater in my room; it doesn't seem to be working. Can you send someone to check and fix it, please?"
S4. There is a mistake in the restaurant bill	CR4. "Hello, I noticed a mistake on my restaurant bill. It includes charges for items I didn't order. Could you please review and correct the bill?"
S5. Your watch in the room is now missing	CR5. "Hi, I've just realized that my watch is missing from my room. I'm quite sure I left it here. Can you please check if it's been found or if someone might have seen it?"
S6. The dish served has turned stone-cold	CR6. "Excuse me, my dish has turned cold. It was served a while ago and is no longer at the right temperature. Could I please get a fresh, hot plate of this dish?"
S7. Your car parked in the hotel is damaged	CR7. "Hello, I noticed that my car, which was parked in the hotel parking lot, has been damaged. Can you please assist me with this issue and let me know how we can resolve it?"
S8. The room does not have the view as reserved	CR8. "Hi, I reserved a room with [describe the view you expected], but my room has a different view. Could you please check if there's another room available that matches my reservation?"
S9. There are extra fees when checking out	CR9. "Hello, I noticed some extra fees on my bill at checkout that I wasn't expecting. Can you please explain these charges and adjust them if they're incorrect?"
S10. The food has not been served to your room after an hour of order	CR10. "Hi, I placed a room service order over an hour ago, but my food still hasn't arrived. Could you please check on the status of my order and let me know when I can expect it?"

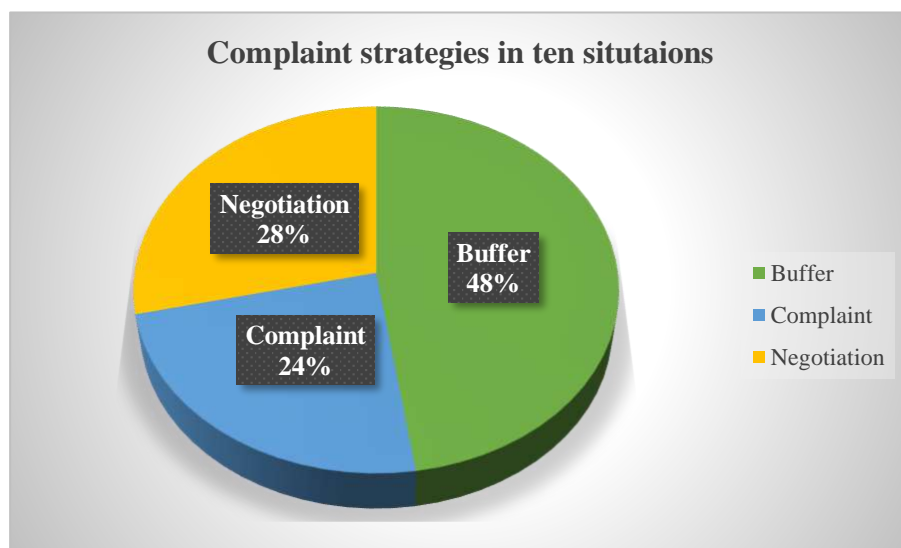
Figure 1 provides an illustration of complaint strategies across ten situations. As discussed in the section on complaining formulae, the complaint-realizing strategies are divided into three categories, Buffer [B], Complaint [C], and Negotiation [N]. The Buffer strategies occupy the largest portion of the pie chart, constituting nearly half of the total number of strategies employed. Besides, Negotiation [N] strategies represent nearly one-third of the strategies,

making them the second most frequently used tactics, whereas Complaint [C] strategies account for the smallest portion, at just under a quarter of the strategies applied.

As can be observed from Table 4, regarding the Buffer sub-strategies, B6 – Provision of context was most frequently spotted. This serves to give justification for the complaint. Typical examples were formulated by using “I noticed ...” or “I’ve realized...” as in [CR1], [CR4], [CR5], [CR7], and [CR9]. It is recognizable from the complaints, that “Excuse me” [B1] “Hi”, or “Hello” [B3] were regularly pinpointed as a device for initiating the complaints. With respect to the head act of Complaint [C], almost all of the complaints used fall into the group of C2 – Direct complaints. It is common for the complainers to explicitly mention the offenses so that the complainees can be aware of those before transitioning to the Negotiation phase of having the issues fixed. In terms of negotiation [N], both N1 – Suggestion and N2 – Request for repair were identified, with N1 being preferable to N2. The use of N1 is capable of supplying the communicating partners with more options to solve the problem and display the speaker’s concern for the hearer’s “negative face” (free from imposition) (Brown & Levinson, 1987).

Figure 1.

Complaint strategies in ten situations



Regarding the complaint patterns of the complaint act, the strategies can be used solely as “separate patterns” with only one strategy wielded or can be merged into what can termed as “integrated patterns” which involve the combination of more than one strategy. Considering the ten complaints gathered, all of them follow the integrated pattern. For instance,

[CR4] “Hello [B3], I noticed a mistake on my restaurant bill [C2]. It includes charges for items I didn’t order [B6]. Could you please review [N1] and correct the bill?[N2]”

[CR6] “Excuse me [B1], my dish has turned cold [C2]. It was served a while ago and is no longer at the right temperature [B6]. Could I please get a fresh, hot plate of this dish? [N2]”

[CR7] “Hello [B3], I noticed that my car, which was parked in the hotel parking lot

[B6], has been damaged [C2]. Can you please assist me with this issue and let me know how we can resolve it? [N1]”

[CR9] “Hello, [B3] I noticed some extra fees on my bill at checkout [B6] that I wasn’t expecting [C1]. Can you please explain these charges [N1] and adjust them if they’re incorrect? [N2]”

It can be noted that in [CR4], [CR6], [CR7], and [CR9] all three strategies were detected, with their sub-strategies clarified. Additionally, the orders of the strategies could be reversed. To illustrate, Buffer sub-strategies can follow those of Complaint as in [CR4] and [CR6]. Furthermore, the combination did not only occur regarding the strategies, but also among the sub-strategies, such as the common integration of B3 and B6 or, B1 and B6 in a complaining speech act set. The same case can be found in the integration of N1 and N2 as in [CR9].

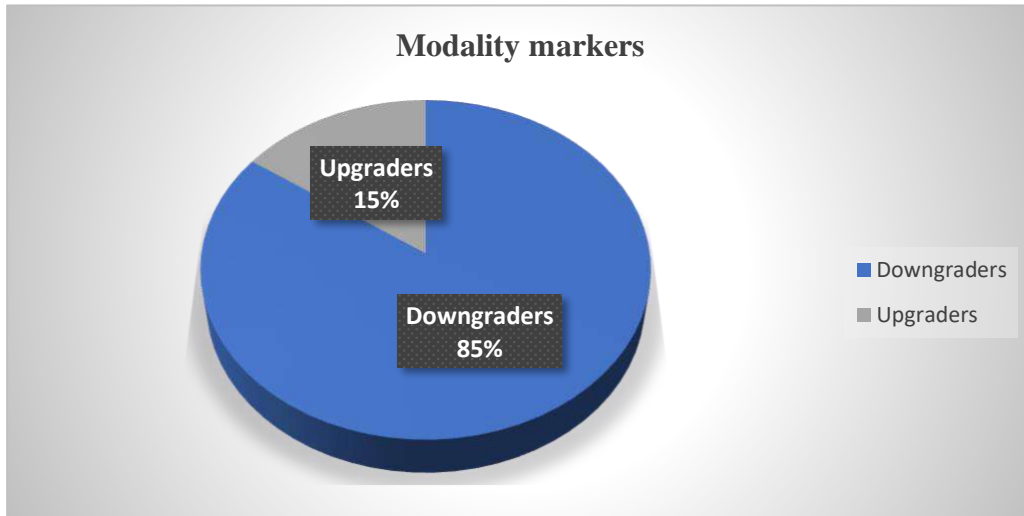
Table 4.

Distribution of sub-strategies of complaining

<i>Strategies</i>	<i>Sub-strategies</i>	<i>Number</i>	<i>Percentage</i>
[B]	B1. Apologizing as a Negative Politeness Device	2	10,0%
	B2. Complimenting	0	0,0%
	B3. Greeting	8	40,0%
	B4. Thanking	0	0,0%
	B5. Forgiving	0	0,0%
	B6. Provision of Context	10	50,0%
	Total	20	100%
[C]	C1. Expression of Disappointment	1	10,0%
	C2. Direct Complaint	9	90,0%
	C3. Negative Assessment	0	0,0%
	C4. Using Irony	0	0,0%
	C5. Challenging	0	0,0%
	C6. Warning or Threat	0	0,0%
	Total	10	100%
[N]	N1. Suggestion	7	58,3%
	N2. Request for Repair	5	41,7%
	Total	12	100%

However, one problem is that the employment of types of strategies and sub-strategies was not as diverse as repetitious. For example, all of the complaints surveyed mostly followed the same pattern of integrated pattern of Buffer coming first, then the Complaint, and finally the Negotiation. Additionally, only one or two sub-strategies for each category of strategy were detected, and they were realized by a limited number of similar expressions. For example, “Hi”, and “Hello” (sub-strategy B3) occurred in almost all of the complaint utterances gathered.

Figure 2.
Modality markers as internal modifiers



The

complaining act can be lessened or exacerbated with the inclusion of modality markers as internal modification devices. The distribution of two kinds of modality markers, namely upgraders and downgraders is depicted in **Figure 2**, **Figure 3**, and **Figure 4**. From the analysis, downgraders (84,8%) were more dominant than the upgraders (15,2%).

Figure 3.
Downgraders in complaints

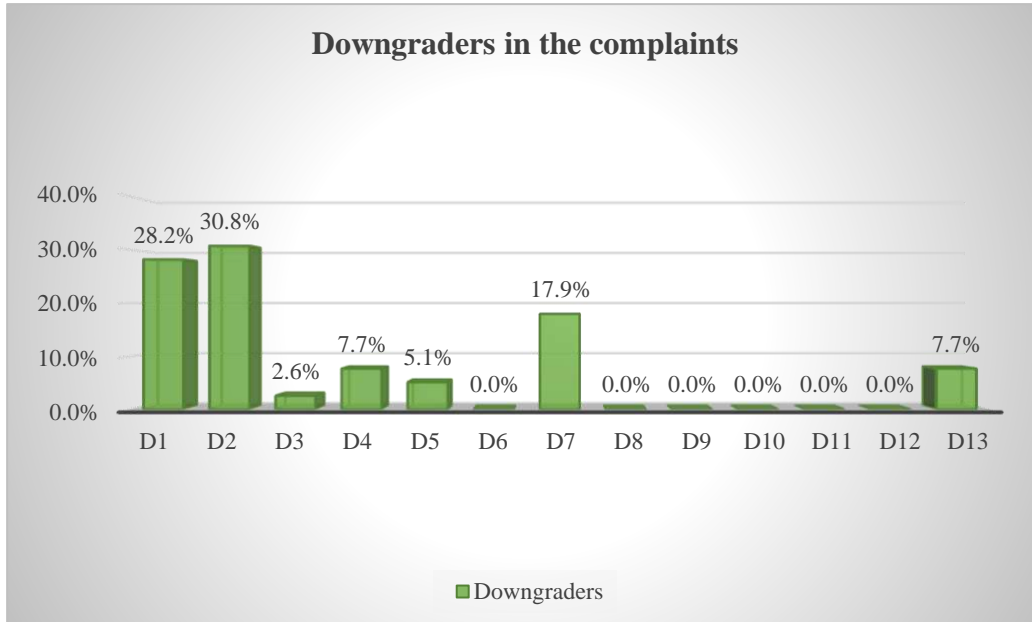
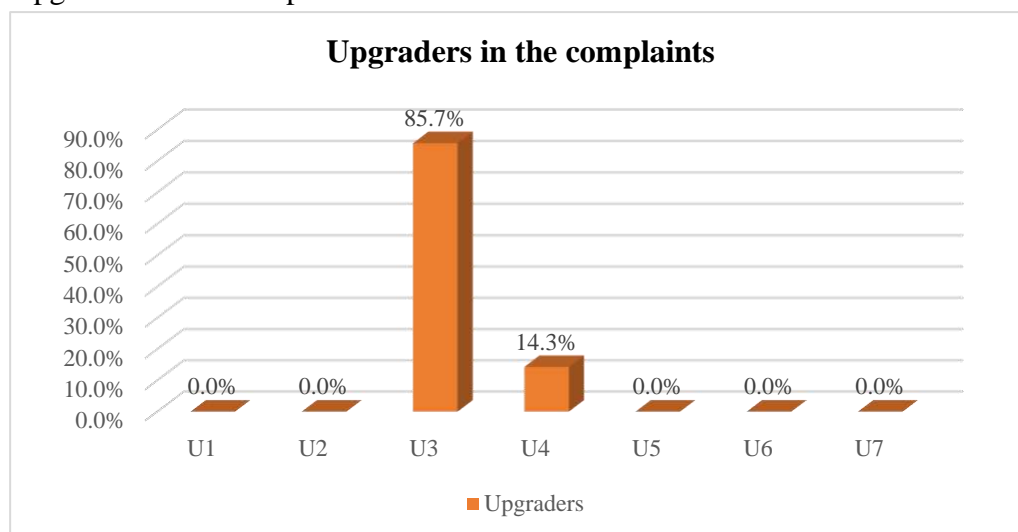


Figure 4.

Upgraders in the complaints



Sample analyses of internal modifiers in complaints are provided as follows,

[CR1] “Hello, I just [D5] checked into my room, and [D13] I noticed that the bed is unmade and the bathroom is quite [U3] messy. Could you [D2] please [D1] arrange for housekeeping to take care of this as soon as possible [U3]?”

[CR5] “Hi, I’ve just [D5] realized that my watch is missing from my room [D7]. I’m quite [U3] sure [U4] I left it here. Can you [D2] please [D1] check if it’s been found or if someone might [D2] have seen it?”

[CR10] “Hi, I placed a room service order over [U3] an hour ago, but [D13] my food still [U3] hasn’t arrived [D7]. Could you [D2] please [D1] check on the status of my order and let me know when I can [D2] expect it?”

According to **Figure 3**, D1 – Politeness markers and D2 – Play-downs were the most frequently used downgraders in the situations examined. To illustrate, D1 – politeness markers were realized as “please” in all of the cases where D1 devices were identified as in [CR1], [CR5], and [CR10]. Besides, the strategies of D2 – play-downs were mostly fulfilled by employing the structures “Could you...?” ([CR1], [CR10]) or “Can you...” ([CR5]). These appeared in the Negotiation element of the Complaining speech act set in order to lessen the effect of the speech on the hearers. Another noticeable feature is that for the sub-strategy C2 – Direct complaints, the downgrader D7 – Agent avoiders were regularly identified, which aims to refrain from mentioning the speakers and the hearers, thus minimizing the face-threat to the interlocutors.

Regarding the upgraders, **Figure 4** displays the prevalence of U3 – Intensifiers among the groups of Upgraders employed. These intensifiers were concretized by “quite”, and “over” as in the examples ([CR1], [CR5], [CR10]), which does not serve to multiply the face-threat degree but rather escalate the urgency of the issue so that it can be solved without delay. In addition, the combined usage of upgraders and downgraders also contributes to balancing the impact of the speech on the complainers as well as rendering the communicative aims fulfilled.

Discussion

Through the scrutinization of the complaints made by ChatGPT in this study, a discernible pattern ([B], [C], [N]) of complaints and breakdown of multiple complaint-realizing strategies are found, indicating an orderly approach and apparent preferences among ChatGPT's responses. The primary finding of this study is the prevalence of buffer strategies [B], which implicates that the creation of a context for complaints is of paramount importance for interlocutors, potentially to guarantee that the recipient is aware of the complaint's justification prior to the complaint itself being delivered. The sub-strategy B6, which pertains to providing context, has been identified as the most frequently implemented buffer technique. This underscores the significance of providing a rationale for complaints in order to promote more fluid exchanges.

Complaint strategies [C], on the other hand, which concern the straightforward expression of complaints, are the least used, accounting for slightly under a quarter of all strategies. The preponderance of the sub-strategy C2-Direct complaints indicates a desire for straightforward issue sharing, which makes it possible to identify the issue before moving on to the negotiation stage. This forthright approach is in line with the requirement for precise communication and clarity when handling problems.

A distinct propensity is also evident in negotiation strategies [N], which account for over one-third of the total number of tactics. N1-Suggestion is preferred to N2-Request for repair, which results in the deliberate attempt to provide a variety of options and simultaneously acknowledge the recipient's individuality, minimizing the imposition on the hearers. The speakers making this choice display their awareness of the "negative face" of the recipients and a willingness to keep the conversation pleasant and collaborative.

Additionally, there is a likelihood that complaint methods follow an integrated pattern, with the arranged combination of buffer, complaint, and negotiation being the most pervasive order. This repeated pattern highlights the necessity for an organized approach to navigating complaints, indicating that an arranged grievance resolution process could be deemed more efficient or socially appropriate. Nonetheless, the low variety of responses and the limited diversity of strategies and sub-strategies deployed reveals that there may not have been much innovation or flexibility in complaint delivery as recommended by ChatGPT. This finding can be supported by the study of Sandler et al. (2024) who found "greater variability and authenticity in human dialogue" (2024, p. 1) as they conducted a comparison between human and ChatGPT-generated language. It should also be noted that uniformity of complaint tactics, which stem from the prevalence of a particular pattern and the employment of merely one or two sub-strategies per category, could have a bearing on the strategies' flexibility under various circumstances.

Modality markers have proved to make a noteworthy contribution as internal modification mechanisms. Play-downs (D2) and politeness signals (D1) are commonly used as downgraders, which assist in creating a less combative tone. This is consistent with the general tendency of upholding politeness and averting possible confrontations. In contrast, intensifiers (U3) are among the preferred upgraders, indicating that speakers frequently try to highlight the

importance or extremity of their complaints – possibly in an attempt to make sure the recipient comprehends the extent to which the matter is.

Conclusion

The paper has provided an overview of the speech act of complaining regarding multiple ways of defining and categorizing it, its relation to directness levels, and the face-threat angle of this kind of speech act. Besides, the foci of the paper also lie in considering the components in the complaining speech act set, and various sub-types of modality markers wielded to soften or heighten the impact of the speech act on the recipients. Anatomy was carried out regarding the ten responses of ChatGPT in its reaction to the ten complaint-stimulated scenarios. The results of the analysis suggest that the complaints of ChatGPT generally abide by the framework of complaint strategies and that of modality markers as internal modifiers. As a result, the complaints provided by ChatGPT, on the whole, can serve their functions of disclosing the issues encountered, having the problems resolved, and simultaneously keeping the face-threat degree to a minimum. However, the operation of these strategies or devices is deemed rather restricted and repetitive concerning what sub-strategies to be adopted and how they are arranged in a complaining set. Despite the limitations, it can be acknowledged that ChatGPT is a noteworthy source of sample responses of complaining act in particular and other speech acts in general.

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Biodata

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Teachers' Perspectives on AI-Driven Quillionz for Generating EFL Reading Comprehension Quizzes

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ABSTRACT

Emerging artificial intelligence (AI) has significant impacts on language learning and teaching, providing innovative pedagogies in sustainable educational settings. Among the powerful tools stands Quillionz (<https://www.quillionz.com>), a free AI-powered platform for building questions, quizzes, and assessments. Nevertheless, there has been little research on teachers' experiences and perceptions of using Quillionz in EFL classroom settings. This study set out to explore teachers' perspectives on utilizing Quillionz to generate reading comprehension quizzes for non-English major students through a pre and post-survey design. The research employed both qualitative and quantitative methods with Likert-scale questionnaires distributed to 48 English teachers from a vocational college in Hanoi before and after using Quillionz over four weeks. A paired sample T-Test was conducted to explore shifts in teachers' perceptions. Subsequently, in-depth interviews were carried out with 10 randomly selected participants for further investigation. The findings revealed positive views among teachers towards Quillionz, its identified potential, and suggestions for more effective implementation. This paper makes a significant contribution to the integration of technology in language teaching, thereby enhancing students' learning experiences.

Keywords: AI, reading comprehension, teachers' perspectives, quizzes, Quillionz

Introduction

In the twenty-first century, artificial intelligence (AI) has become a key component of language education, which not only alters traditional teaching methods but also improves the learning and teaching experience. Since it was reported in the research of Liang et al. (2021), AI technology has provided novel solutions that reduce educational activities while simultaneously increasing students' engagement through adaptive learning. In addition, AI-powered tools help teachers create vocabulary and grammar quizzes, reading comprehension exercises fast and efficiently. They automate the generation of questions and tests so that instructors can focus on

learners' language acquisition rather than administrative responsibilities (Dijkstra et al., 2022). Existing research recognises the critical role played by AI in English as a Foreign Language (EFL) education, with studies showing the ability of AI-powered technologies to improve learning outcomes (Marr, 2018; Li, 2020; Wang et al., 2023). AI systems have gained traction for their ability to speed quiz production, provide on-time feedback, and improve students' autonomy, which assists teachers to check students' comprehension while saving time (Alam, 2023). Dijkstra et al. (2022) found that AI-driven technologies improve quiz accuracy and content alignment to create more effective learning assessments. Similarly, Khan et al. (2021) discovered that AI-generated quizzes enable a more tailored and efficient evaluation procedure, which benefits both instructors and learners.

Quillionz, an AI-driven platform that can automatically generate questions from reading materials, is a powerful tool to reduce teachers' workload. Within the educational context of Vietnam, this study examines the opinions of EFL teachers at a vocational college in Hanoi on the use of Quillionz, an AI-based web, to generate reading comprehension quizzes. By exploring teachers' perceptions, attitudes, and perceived efficacy towards the integration of AI integration in quiz generation, the study offers some important insights into the practical applications of AI in language teaching. Furthermore, the research makes a major contribution to research on the function of AI in educational settings, namely in improving teaching efficiency and student learning results.

Literature review

AI and its impacts on EFL education

The application of artificial intelligence (AI) into education has reformed many aspects of teaching and learning, especially in EFL education. Thanks to AI technologies, traditional teaching methods have been revolutionized with a number of educational activities, such as offering personalized, adaptive, and data-driven instructional approaches (Konar, 2018). In EFL contexts, learners frequently struggle with complicated linguistic patterns and different competence levels; however, AI appears as a valuable ally in speeding learning processes and delivering more engaging, tailored learning experiences (Russell & Norvig, 2016).

Moreover, AI's capacity to evaluate real-time data gives teachers vital insights into student progress, allowing for focused interventions and individualized support (Alam, 2023). AI-powered platforms, such as the Language Hub system, which aims to transform language teaching in vocational colleges, allow educators to personalize learning experiences, track progress, and provide timely feedback (Nguyen et al., 2024).

Several AI-powered tools are now integrated into EFL training, which assists students in developing their language abilities. Some tools, namely Grammarly, Duolingo, and Rosetta Stone, use AI technologies, including natural language processing and machine learning, with a view to providing on-time feedback on grammar, vocabulary, and pronunciation. These technologies respond actively to the learner's input, thereby ensuring optimal levels of challenge and scaffolding (Deng & Yu, 2023).

Furthermore, AI chatbots provide real-time conversational practice, enhancing students' speaking and comprehension skills in practical contexts (Hoang et al., 2023). The research conducted by Pokrivcakova (2019) indicates that AI-powered tools are used effectively to give students formative feedback and practice opportunities outside the classroom, which helps to reinforce their language skills.

Several lines of evidence from the studies of Lelkes et al. (2021) and Khan et al. (2021) suggest that AI-powered tools like GPT-3 are the crucial creators of reading comprehension quizzes (including questions, correct answers and distractors) which significantly reduce the teachers' time and effort. In addition, according to Dijkstra et al. (2022), while early quiz generating models were rule-based, developments in neural and transformer-based techniques have substantially increased the correctness and complexity of questions. This is particularly beneficial in EFL settings, where quizzes provide essential practice for language acquisition. For example, the research of Khan et al. (2021) claims that the EduQuiz model fine-tunes GPT-3 is able to automatically generate high-quality comprehension quizzes so that teachers can focus more on in-class instruction.

Nevertheless, a key challenge in quiz generation is creating plausible distractors or incorrect answers that are close enough to the correct ones to test comprehension effectively. Datasets like EQG-RACE in the study conducted by Dijkstra et al. (2022) help address this problem to improve AI's ability to create quizzes with meaningful distractors. Therefore, AI-driven tools offer a practical solution for teachers to save time while ensuring the value of quizzes (Dijkstra et al., 2022).

Teachers' Perceptions on Using AI-Driven Tools in EFL Education

The academic literature on AI tools in education has revealed that teachers' opinions about technology directly affect how successfully they include AI tools into their teaching strategies (Ertmer et al., 2012; Bowman et al., 2022). Although teachers' uncertainty or a lack of confidence may hinder the AI integration, supportive ones still have positive attitudes toward AI-driven tools that can provide them with more meaningful applications in the classroom.

Moreover, recent research has indicated that teachers appreciate AI tools' time-saving and efficiency-enhancing aspects, such as automated grading, adaptive learning, and formative feedback systems. However, some teachers express concerns about the potential lack of human interaction in AI-supported learning environments, which, according to Rusmiyanto (2023), could prevent students' development of essential interpersonal skills needed for their language proficiency.

The Importance of Reading Skills in EFL Education

Reading is an essential ability in education, especially in English as a Foreign Language (EFL) environments, where students rely on reading to develop language competency. Reading comprehension entails not just identifying words but also building meaning from written words, making it critical for academic performance (Pretorius & Machet, 2004). For non-English majors, reading often serves as a primary way to engage with the language, given that spoken practice may be limited.

Reading comprehension activities are especially useful in the EFL classroom because they expose students to a wide range of linguistic structures, vocabulary, and cultural material (Richards & Rodgers, 2001; Klapwijk, 2012). Furthermore, comprehension tests can be used to check and reinforce previously learned skills. These tests encourage students to interact with the content more deeply, boosting retention and application of new vocabulary, grammatical structures, and general comprehension (Zimmerman et al., 2007).

Reading comprehension quizzes assists students in strengthening their skills by encouraging concentrated reading and active involvement with readings. These quizzes assess students' abilities to extract relevant information, comprehend language in the reading's context, and draw conclusions from the material. However, traditional quiz creation can be time-consuming for teachers, especially when questions must be tailored to students' varied levels of skill (Alam,

2023).

Quillionz as an AI Tool for Question Generation

According to information from the official website of Quillionz, it is an innovative AI-powered platform that streamlines question generation for various educational purposes. With machine learning algorithms, Quillionz allows educators to generate a range of questions, including multiple-choice and open-ended questions, from instructional content in seconds. Its combination with modern natural language processing models such as GPT-4 improves the quality and diversity of the questions generated, which aligns them with learning objectives and caters to a wide range of student demographics. Quillionz also consists of seamless interaction with popular Learning Management Systems (LMS), such as Canvas, as well as the option to export questions in several formats (PDF, DOC, QTI), which makes it easier to use in both online and traditional classrooms.

While Quillionz brings such potential advances in creating questions, more study is needed to determine its impacts on language teaching and learning, especially in EFL environments. Despite the platform's promise to reduce time and improve the quality of reading comprehension quizzes, little research has been conducted to investigate its effectiveness in real-world classroom settings, particularly at vocational schools. Furthermore, there has been a lack of extensive research on teachers' viewpoints on the practical problems and benefits of incorporating AI-driven question generators into their instructional routines for non-English majors. Therefore, this study seeks to address that gap by investigating the teachers' perceptions and attitudes at vocational colleges towards the usage of Quillionz for creating reading comprehension quizzes.

Research Question

The aim of this study is to investigate teachers' perceptions of Quillionz in generating reading comprehension quizzes. Thus, the authors seek to address the following study question:

What are English teachers at vocational colleges' perceptions of the effectiveness of Quillionz in generating reading comprehension quizzes for non-English major students?

Methods

Pedagogical Setting & Participants

The research was conducted in a vocational college in Vietnam, which is known for its commitment to modern technology. The college offers a wide range of programs in this field, such as information technology, software development, digital marketing, and mobile application development. This college focuses on the integration of technology into its learning and teaching environment, where students bring their laptops to class on a regular basis to support their studies. At this college, students are enrolled in a seven-semester program, during which they are requested to complete four levels of English language courses, namely English 1.1, 1.2, 2.1, and 2.2. The curriculum for these courses, tailored based on the American Language Hub by Macmillan Education, is used consistently across the 4 levels to ensure that students build a solid foundation in English and enhance digital literacy skills through technology-integrated instruction.

The study comprised 48 teachers who are in charge of English 1.2 and 2.1 during the Fall semester at this college. The respondents have extensive experience in teaching English, with half of them possessing 2 to 5 years of teaching experience and nearly 30% having 6 to 10 years

of experience, and 15% having less than 1 year of teaching experience. Subsequently, ten teachers were selected in the qualitative phase of the research based on their willingness and availability. This phase involved in-depth interviews for a deeper investigation. For privacy, the identities of teachers will be kept anonymous, with the interviewed participants named T1 to T10.

Data collection & analysis

Data for the research were gathered through two online survey questionnaires utilizing Google Forms (before and after employing Quillionz GPT), and in-depth interviews with ten participants. The questionnaires were adapted from that of Siyam et al. (2022), which assessed teachers' perceptions of AI in education, particularly focused on Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Behavioral Intention (BI) towards employing AI tools in their teaching. In this study, the survey was modified to concentrate on Quillionz, an AI-powered platform for generating quizzes.

The survey was distributed to 48 participants online. The adapted version included questions regarding teachers' perceptions and experience in using AI tools in their language teaching before and after employing Quillionz, in addition to Likert-scale items (from strongly disagree to strongly agree) investigating their perspectives towards the use of this platform. The survey comprised two phases: a pre-survey before participants used Quillionz and a post-survey, which mirrored the first to allow direct comparison after a four-week period of using this tool in their classrooms. During the four-week period, teachers were requested to use Quillionz regularly in their lesson planning. Each teacher conducted at least three reading lessons per week according to the curriculum. This consistent exposure allowed participants to thoroughly test the platform, generating a variety of reading comprehension quizzes. After collecting information via two surveys, a paired sample T-test will be used to compare the results from the pre- and post-surveys, determining whether there was a statistically significant enhancement in teachers' perspectives of Quillionz regarding efficiency, ease of use, and the variety and quality of the quizzes created. Eventually, in-depth interviews were carried out to gain deeper insights into teachers' experience in using Quillionz. There were 4 interview questions, lasting approximately 5-7 minutes for each to further explore detailed experiences, challenges, and suggestions for improvement after the utilization of Quillionz.

For data analysis, statistical methods were utilized. Mean scores and standard deviations were computed to summarize the responses collected from the pre- and post-intervention surveys. Furthermore, paired sample t-tests were conducted to compare pre- and post-intervention responses. These statistical tests allowed for the evaluation of any significant changes in teachers' perspectives and experiences related to Quillionz after the integration. Following this, a paired sample T-test was conducted to compare participants' perceptions before and after using Quillionz. The data were presented in tables to represent the findings visually. In relation to the qualitative phase, the interviews were recorded and transcribed thoroughly using an intelligent verbatim transcription protocol, which allows the author to note down only meaningful and relevant sentences. The researcher employed thematic analysis to examine their responses, classified them into main themes, and then wrote down the report. The insights obtained from these interviews were analyzed thematically and used to contextualize the results of the paired sample T-test, offering a richer interpretation of the data.

Findings and discussion

Teachers' perceptions and experience in using AI to generate questions

Figure 1

Teachers' perceptions and experience in using AI to generate questions

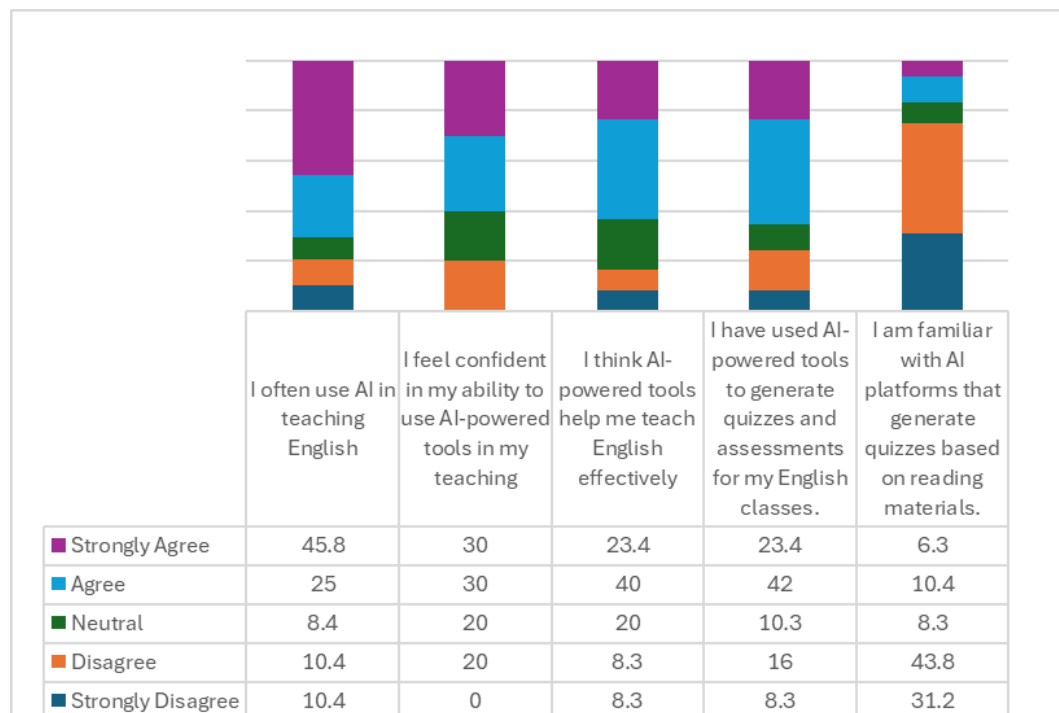


Figure 1 provides insights into teachers' perceptions and experiences about the utilization of AI tools in teaching English, particularly in generating quizzes and assessments. When asked whether they regularly apply AI in their teaching practices, a significant number of teachers (70%) reported using AI, highlighting that teachers are taking advantage of AI tools to diversify and enhance their English lessons. However, 18.2% expressed an opposite opinion. This finding bears a resemblance with that of Lelkes et al. (2021), who underscored a growing usage of AI in classroom settings. Additionally, research conducted by Khan et al. (2021) pointed out that while AI adoption has been increasing, factors like lack of familiarity or complexity hinder wider employment.

Regarding teachers' confidence in adopting AI tools, most participants (60%) expressed confidence in integrating AI in teaching English, while 20% remained neutral and 20% felt uncertain about their ability to use AI. These findings suggest that while a large portion of teachers are familiar with AI adoption, a notable portion may require additional support or training to better enhance their confidence in utilizing AI in teaching. These results are consistent with those of the interview section, in which teachers were asked if they faced any difficulties in using AI (question 1). Several challenges were reported, including the complexity of some AI tools, a lack of training, time constraints, and technical issues. Some teachers stated that they attempted to use some tools to generate quizzes or create slides but the interface is not user-friendly and it took them a lot of time to get used to it, so they abandoned them. (T3, 5, and 7) When asked about the effectiveness of AI-powered tools in teaching English, a significant portion of surveyed teachers agreed that AI helps them teach English efficiently. This aligns with the broader literature, which supports the ideas that teaching and learning English has become easier with the development of technology and digital platforms (Shin,

2018). Ribeiro (2020) claims that applying Artificial Intelligence in English Language Teaching (ELT) is the most practical way for teaching English.

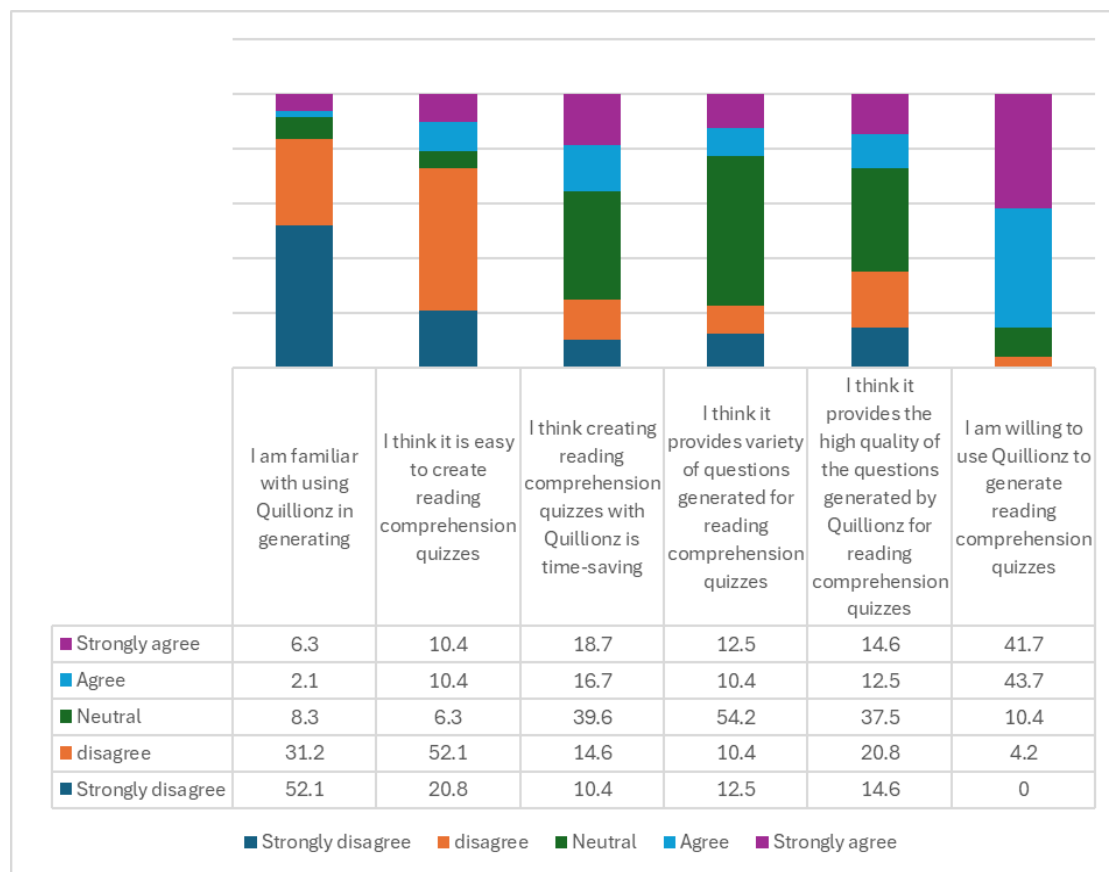
The result was different regarding the use of AI in generating quizzes in general and reading quizzes in particular. As can be seen in Figure 1, while 65% of participants indicated using AI for creating quizzes and for assessment, only 16.7% reported using AI platforms for general reading quizzes. When interviewed (question number 2), teachers expressed that they frequently used AI to generate grammar and vocabulary quizzes rather than reading quizzes due to the time-consuming nature of creating reading quizzes and the lack of available reading resources on AI platforms. These results are in accord with recent studies indicating that teachers tend to apply AI tools to generate straightforward question types such as grammar and vocabulary quizzes, which require less contextual understanding compared to reading questions (Lelkes et al., 2021; Wang et al., 2023)

Teachers’ perceptions towards Quillionz before the integration

Figure 2 illustrates teachers’ perspectives of Quillionz before 4-week integration.

Figure 2

Teachers’ perceptions towards Quillionz before the integration



One interesting finding is that a remarkable portion of respondents (84%) expressed their unfamiliarity with using Quillionz to create reading quizzes. Only 8.4% agreed that they are familiar with the tool, indicating a significant lack of awareness or experience in using this tool among teachers. The lack of experience could explain some of the hesitations and neutral responses among respondents throughout the pre survey. Furthermore, when asked whether it was easy to create reading quizzes or not, a substantial 73% of respondents claimed that creating

reading questions is challenging, while only 10% view it positively.

Regarding whether Quillionz helps teachers save time, nearly 40% remained unsure, while 35% expressed their agreement, and 25% of respondents strongly disagreed with the statement, indicating a potential gap in perceived and actual efficiency of the tool. Additionally, in terms of the variety and quality of questions generated by Quillionz, there is considerable uncertainty among surveyed teachers. Specifically, more than half of respondents feel unsure about the diversity of quizzes designed by Quillionz, while 23% believe it provided various questions. Similarly, many teachers remain doubtful about the quality of questions since nearly 38% remain undecided and 35% do not believe that Quillionz generates high-quality reading questions. However, a positive trend is still emerging in the willingness to use Quillionz. A striking 85% of respondents expressed their willingness to adopt the tool, while only 10% remained neutral, indicating that in spite of some hesitations around the familiarity and effectiveness of Quillionz, teachers are open to employing new tools to enhance their teaching.

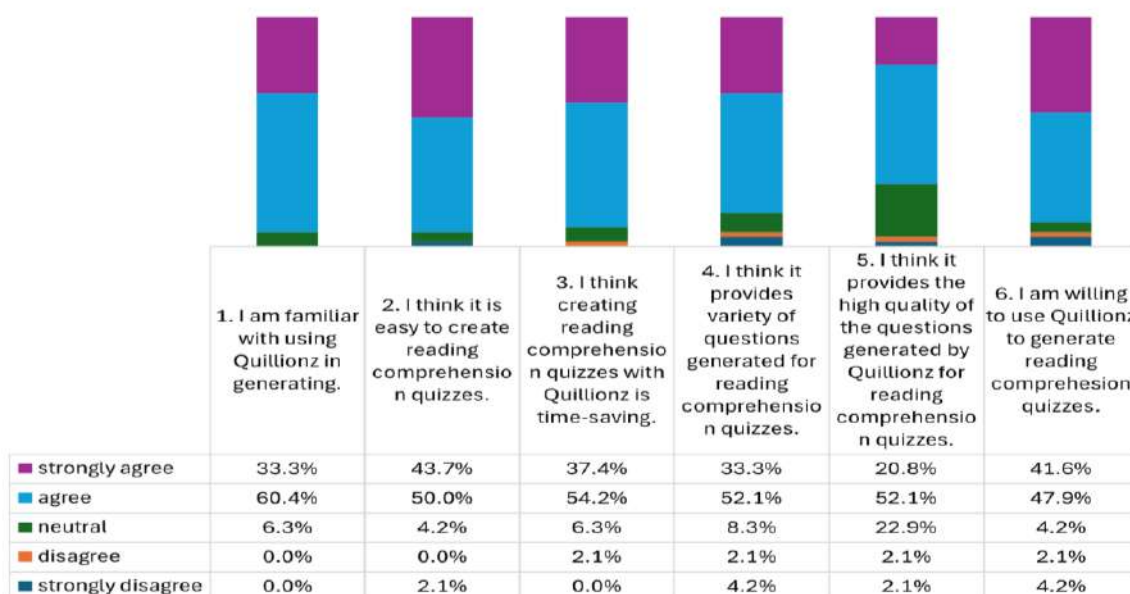
In conclusion, while data show a strong willingness to use Quillionz in English reading lessons among surveyed teachers, unfamiliarity with the new platform may be a barrier, leading to the uncertainty about the quantity and quality of questions generated automatically by Quillionz as well as its overall efficiency in teaching. These results corroborate the findings of McNulty (2023), which highlights that teachers often express doubt about the actual benefits gained from AI technology before using it. Lelkes et al. (2021) also noted that teachers do not completely trust the quality of AI-generated content until they consistently experience positive outcomes.

Despite initial concerns about the effectiveness of Quillionz, teachers expressed a collective willingness to try this AI platform, suggesting its potential positive impacts on their pedagogical practices. Previous studies have also noted that teachers are open to try different AI tools when they recognize their potential benefits for reducing workload and increasing their lessons' quality, despite initially facing challenges, such as lack of familiarity and training, or technical issues (Kaplan-Rakowski et al., 2023; Perrotta & Selwyn, 2020).

Teachers' perceptions towards Quillionz after the intervention

Figure 3

Teachers' perceptions towards Quillionz after the integration



As shown in Figure 3, the vast majority of teachers, who were familiar with Quillionz, account for 60.4% agreeing and 33.3% strongly agreeing that they have used it to make quizzes before. Surprisingly, no one disagreed or strongly disagreed with the statement. This high degree of familiarity suggests that teachers had ample exposure to Quillionz throughout the intervention, consistent with previous research that indicates hands-on experience enhances confidence in using AI tools (Bowman et al., 2022). The absence of negative responses indicates that Quillionz is generally intuitive and accessible for educators, even for those with limited prior AI experience.

Figure 3 also depicts the ease of utilizing Quillionz. While 93.7% of teachers both agreed and strongly agreed that it was simple to design reading comprehension quizzes with Quillionz, only 4.2% were neutral and 2.1% strongly disapproved. These positive findings demonstrate Quillionz's ability to streamline the quiz design process, which is consistent with the findings of Khan et al. (2021) and Alam (2023), who highlighted the significance of AI in lowering educators' workloads. The minimal disagreement suggests that while the platform meets the needs of most users, a small fraction may encounter challenges, potentially linked to preferences for more manual control or technical difficulties.

What stands out from the data from the above figure is that there is a huge potential of Quillionz in reducing quiz generation time for teachers, with approximately 92% agreeing and strongly agreeing that the platform helped save time in generating quizzes. This finding not only supports AI's ability to automate quiz creation but also aligns with the research of Dijkstra et al. (2022), who noted that AI-driven platforms accelerate the processes of generating quizzes and reduce teachers' burden.

The most striking result that emerges from the data is the variety of questions generated by Quillionz. Nearly 86% of teachers agree and strongly agree that the platform offers varied kinds of questions for reading comprehension quizzes. This positive result expresses Quillionz's ability to offer an adequate range of question types, which is consistent with previous findings by Alam (2023), who claimed that AI tools can generate a wide range of learning assessments. Nevertheless, there is still a small proportion of disagreement (more than 10%), which indicates that regarding complicated comprehension topics, the platform's algorithms may not fully capture the depth required, as similarly noted in the research of Khan et al. (2021).

Furthermore, a significant percentage, approximately 73%, of participants reported in the survey that the questions generated by Quillionz were of high quality. Although a majority of teachers found the quality of questions satisfactory, the relatively high percentage of neutrality (22.9%) indicates that some educators still have reservations about the quality of AI-generated questions. These results reflect concerns of Khan et al. (2021) and Dijkstra et al. (2022), who both also confirmed that teachers expressed doubts about the accuracy and contextual relevance of AI-generated content, particularly for complex reading comprehension tasks. While Quillionz performs well in producing basic and intermediate questions, there may be limitations in generating more sophisticated, higher-order thinking questions, leading to this split in teacher perceptions.

The above findings are consistent with those from the research interview, which underscores the advantages teachers obtain from Quillionz. One of the major benefits noted by almost all participants was the time-saving potential of Quillionz. Several teachers, including T1 and T6, expressed that once they became familiar with the platform, it helped significantly reduce the amount of time spent on quiz creation. They no longer needed to manually design quizzes, which allowed them to focus on other instructional tasks. T8 mentioned that Quillionz was especially useful for quickly generating a variety of reading comprehension questions, which

would typically take much longer if done manually. Thus, the benefit indicates that Quillionz’s automation feature was a key advantage for many users. Another highlighted benefit was the diversity of questions that Quillionz was able to generate. Several participants (T2, T7, and T9) appreciated the wide range of question formats, which helped to maintain students’ engagement by offering different types of comprehension challenges. As T4 stated, “The various types of questions allowed me to create the quizzes suitable for different reading levels without having to regenerate entire sets of questions from scratch.”

It can finally be seen from the data that after four weeks of utilization of Quillionz, most teachers, almost 90%, viewed the platform as a beneficial addition to their teaching practices and agreed to continue using it for quiz generation in the future. These positive results indicate that most teachers found Quillionz valuable, which supports Alam’s (2023) conclusion that AI tools offering ease of use and time-saving benefits generally result in higher adoption rates. However, the small percentage of resistance suggests that a minority of teachers may have encountered obstacles.

Changes in perceptions towards Quillionz usage for generating reading quizzes before and after the integration

Table 1.

Paired sample t-test results related to teachers’ perceptions towards utilizing Quillionz to create reading comprehension questions

Variables	Mean diff	t	df	cv
1. I am familiar with using Quillionz in generating	2.48	15.60	47	2.01
2. I think it is easy to create reading comprehension quizzes	1.96	10.52	47	2.01
3. I think creating reading comprehension quizzes with Quillionz is time-saving	1.08	8.11	47	2.01
4. I think it provides variety of questions generated for reading comprehension quizzes	1.08	6.67	47	2.01
5. I think it provides the high quality of the questions generated by Quillionz for reading comprehension quizzes	0.96	6.50	47	2.01
6. I am willing to use Quillionz to generate reading comprehension quizzes	-0.02	0.18	47	2.01

The paired sample t-tests demonstrate significant improvements in several areas of teachers’ perceptions toward Quillionz after the intervention.

In terms of familiarity with Quillionz, the paired sample t-test showed a notable increase, with a mean difference of 2.48 and a t-value of 15.60. This indicates that teachers became much more familiar with the tool after using it, which moved from initial uncertainty to a higher comfort level. Likewise, the impression of ease in constructing reading comprehension questions improved dramatically, with a mean difference of 1.96 and a t-value of 10.52. This

implies that after teachers had actual Quillionz experience, they found it simpler to create quizzes.

Moreover, Quillionz's time-saving ability received a positive change. Teachers' rising awareness of the tool's efficiency in producing quizzes, which was the main factor behind Quillionz's general appeal, is showcased via the mean difference of 1.08 and a t-value of 8.11. Also, teachers observed a change in the question variety that suggested growing confidence in Quillionz's ability to offer diverse quiz content, proved by a mean difference of 1.08 and a t-value of 6.67. It is, furthermore, worth noting that there were improvements in teachers' perspectives of the question quality, as indicated by a mean difference of 0.96 and a t-value of 6.50. Teachers, first dubious though, grew more confident in the tool's ability to create high-quality comprehension quizzes.

Interestingly, although most areas saw notable positive changes, teachers' inclination to continue using Quillionz remained constant, with a mean difference of -0.02 and a t-value of 0.18, demonstrating no significant change. This implies that teachers were already eager to use the tool before the intervention, and this favorable attitude remained consistent afterward.

In conclusion, it is evident that participants expressed a positive change in their perceptions towards utilizing Quillionz to generate reading comprehension quizzes. These results corroborate the findings of a great deal of the previous work by Duong et al. (2024), Chen et al. (2022) and Nguyen (2024), which demonstrated teachers' growing acceptance of AI tools in educational contexts. Similarly, this study highlights the potential of Quillionz to streamline the quiz creation process, particularly for non-English major students, while enhancing the variety and quality of questions generated by Quillionz.

Besides, the significant improvements in teachers' familiarity, ease of use, and time-saving perceptions contribute to expanding research on AI-driven tools in EFL. This research only examines the value of integrating Quillionz into creating reading comprehension activities. Future research could explore the long-term impacts of using AI-based tools like Quillionz on quiz design efficiency and student learning outcomes to provide valuable insights for educators aiming to optimize instructional strategies through technology integration.

Teachers' challenges and recommendations

Findings from interviews revealed several drawbacks of Quillionz and some recommendations for users and the developers of this website as well. Two main challenges highlighted by teachers included lack of customization options, limited control over question quality, and interface complexity. While the tool could generate a wide range of questions, some teachers (T3, T5, and T9) still need to modify the questions to suit their specific classroom needs. T9 explained, "Although Quillionz is useful, I still have to spend time adjusting the questions to align with my lesson objectives." T7 and T10 expressed their concerns about the quality of questions since some questions need to be reviewed and edited.

As noted by T8, while Quillionz can generate lots of questions automatically after inputting the reading materials, not all questions are perfect. Some need to be modified manually to align with the reading objectives. One obstacle teachers encountered during the integration was technical problems, which caused frustration, especially when teachers were pressed for time. T5 mentioned, "There was one time when I nearly finished my set of quizzes, then the system suddenly froze, and I had to restart the whole process. I was really stressed." This problem was also experienced twice by T7. Though not often, these technical issues might negatively affect teachers' overall experience.

Additionally, teachers also provided a set of recommendations on Quillionz's improvement,

with the primary focus on its functionality and usability. One principal suggestion was that Quillionz developers should offer more customization options. As mentioned by some interviewees, Quillionz should provide various question types at different difficulty levels and with diverse content focus to better align with teachers' curriculum needs. Furthermore, teachers suggested that the website incorporate more online games to diversify lessons and engage students in reading activities. Several participants also recommended that, to make this platform easier to use, tutorials or instructions should be included. They suggest that website developers implement a feature where the tutorials automatically pop up when users access the website, making it approachable for all teachers. These suggestions are consistent with those of previous studies, such as Kaplan-Rakowski and Grotewold (2023), which highlight the significance of training and assistance when introducing new technologies in educational settings.

Conclusion

In conclusion, our study emphasizes the notable changes in teachers' perspectives of utilizing online quiz-generating platform Quillionz in their English reading lessons before and after a 4-week integration. Several benefits of this AI were recognized by most of the surveyed teachers, including saving time in creating quizzes, engaging students into reading exercises thanks to the available games on the platform, and offering various questions in a short time. While the majority of Quillionz-created quizzes are reasonable, some are irrelevant and need to be modified, and the quality is sometimes lower than human-generated quizzes. Besides, challenges such as limited customization options or technical issues were also reported. Additionally, teachers proposed some recommendations, including the addition of online games or tutorial features, to develop this AI platform better.

Although our results are encouraging, the study still has some limitations due to its small sample size in a short time and reading comprehension focus, which might not capture the long-term perceptions and effectiveness of Quillionz. Therefore, future research is suggested to assess long-term effects and explore the impact of Quillionz on students' outcomes, as well as compare it with other AI tools to identify its unique strengths and areas for improvement. Research on utilizing Quillionz for broader assessment or investigating student's perspectives is also recommended.

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Perceptions of Postgraduates Towards Using Citation Management Software in Academic Writing: A Case Study in a Vietnamese University


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ABSTRACT

Keywords: citation management software, Mendeley, academic writing, perception, bibliographic information

Citation management software (CMS), especially Mendeley, has been suggested for researchers to automatically manage bibliographic information thanks to its complementary version with significant space for data storage. However, little research has been conducted regarding the applicability of Mendeley to the academic writing of postgraduates, especially in Vietnam. This study examined postgraduates' perspectives toward utilizing Mendeley in academic writing during their language master's programs at a public university in Vietnam using a mixed method. Data was collected through pre- and post-survey questionnaires of 45 postgraduates majoring in foreign languages and in-depth interviews for a thorough investigation. The findings indicated that Mendeley enhanced the participants' research productivity and quality, but technological issues and a lack of training limit its use. Also, the study recommended that the institution organize workshops, seminars, and fundamental training courses in Mendeley for postgraduates to use it efficiently.

Introduction

In recent years, research activities and the publication of research articles have remarkably increased, amplifying the demand for efficient technology-driven tools that can help researchers manage the growing volume of research literature. Willett (2013) indicated that citation plays a significant role in academic research since it gives credit to the original sources and allows readers to verify the information. Additionally, citation is crucial for establishing a credible and reliable scholarly foundation.

However, surveys of Asian students conducted by Keck (2014) and Shi (2006) revealed that students receive limited instruction in citation. This lack of knowledge and awareness about citation rules results in plagiarism among students, and particularly postgraduates, in their academic works. With the growing number of online scholarly resources, researchers are

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advised to utilize citation management software to store, organize, and retrieve bibliographic information automatically and properly for their research papers and other academic works (Hensley, 2011).

Zhang (2012) pointed out the four most widely used citation management tools, including Endnote, Zotero, Connotea, and Mendeley, which enable scholars to tackle sophisticated and difficult-to-use reference styles such as APA, MLA, and Chicago. Among them, Mendeley has become increasingly popular among researchers worldwide due to its powerful features that help them efficiently manage and organize their sources while writing research articles. However, adopting and utilizing these tools may vary across disciplines and research cultures.

Despite Mendeley's effectiveness in managing citations, there has been little research on its use in Vietnam. Therefore, this study was conducted to fill the gap by exploring Vietnamese postgraduates' perspectives of utilizing this technology in their academic writing.

Literature review

Definition of citation in academic writing

A citation is a method of providing credit to those whose creative and intellectual works were used to assist scholars' study and academic writing, whether those are books, interviews, documents, websites, poems, or paintings (Vijai, Natarajan & Elayaraja, 2019). It is also possible to track down specific sources and prevent plagiarism. Based on the citation, readers are able to confirm the researcher's work or simply explore it further. Therefore, a proper citation should never mislead readers. The name of the author, the date, the name of the publisher, the name of the journal, or a DOI (Digital Object Identifier) are usually included in a citation.

Citation is not only a way of acknowledging other researchers' works but also of validating the author's knowledge statements. Berkenkotter and Huckin (2016) demonstrated the importance of citations by naming them the weapons scholars used to convert previous literature in the field to their advantage in the article "You are what you cite".

Popular citation styles

The researcher's citation format is determined by the lecturer, the journal, or the publisher, if a manuscript is being submitted. Each field, though, often employs one or two styles. The table below shows the specific citation styles used in different aspects:

Table 1.

Some specific citation styles used in different aspects

Fields	Citation styles	Fields	Citation styles
Anthropology	<i>Chicago</i>	Law & Legal studies	<i>Bluebook, Maroonbook or ALWD</i>
Art History	<i>Chicago or Turabian</i>	Linguistics	<i>APA, MLA or LSA</i>
Arts Management	<i>Chicago</i>	Literature	<i>MLA</i>
Biology	<i>CSE</i>	Mathematics	<i>AMS</i>
Business	<i>APA, Chicago or Harvard</i>	Medicine	<i>AMA, NLM</i>
Chemistry	<i>ACS</i>	Music	<i>Turabian or Chicago</i>
Communications	<i>MLA</i>	Philosophy	<i>MLA or Chicago</i>
Computing Science	<i>Chicago</i>	Physics	<i>AIP,</i>
Criminology	<i>APA or Chicago</i>	Political Science	<i>APSA</i>
Education	<i>APA</i>	Psychology	<i>APA</i>
History	<i>Chicago or Turabian</i>	Religion	<i>MLA or Chicago</i>
International Studies	<i>APA, APSA, or Chicago</i>	Sociology	<i>APA</i>
Journalism	<i>AP or APA</i>	Theater	<i>MLA or Chicago</i>

Source: <https://subjectguides.library.american.edu/c.php?g=175008&p=1154150>

In spite of some differences among these citation styles, they all have similar basic goals: identify and credit the sources and provide readers with specific information so they can access these sources on their own.

Of all citation styles, Lipson (2011) pointed out three main ones, including:

- Chicago (or Turabian), used in many disciplines in the humanities, social sciences, and natural sciences.
- MLA (Modern Language Association), used in humanities
- APA (American Psychological Association), used in Social Sciences, Education and Engineering

Here are some typical examples of using these three styles in citing (with known authors).

Table 2.

Some typical examples of using three styles above in citing

Citation style	Material type	In-text citation	Bibliography
APA	A book	(Sapolsky, 2017)	Sapolsky, R. M. (2017). <i>Behave: The biology of humans at our best and worst</i> . Penguin Books.
MLA	A book	(Wordsworth 263)	Wordsworth, William. <i>Lyrical Ballads</i> . London: Oxford U.P., 1967. Print.
Chicago	A book	(Pollan 2006, 99–100)	Pollan, Michael. 2006. <i>The Omnivore's Dilemma: A Natural History of Four Meals</i> . New York: Penguin.

Common APA errors

Dealing with citations when writing academic writing is not a simple task, no matter what style it belongs to. Researchers frequently use the American Psychological Association (APA) style when writing research papers, among all of the citation styles mentioned in the previous section. However, many authors may struggle with this style for certain reasons, including common errors in APA in-text citations and reference lists.

Reference Lists

Freysteinson, Krepper, and Mellott (2015) pointed out four common APA errors in relation to reference lists, including capitalization, italics, ampersands, and digital object identifiers (DOIs).

The most prevalent inaccuracy on reference lists is capitalization, with only the initial word of the article title, book title, subtitle, and proper names capitalized. An example of correct capitalization is shown below.

Lipson, C. (2011). *Cite right: a quick guide to citation styles - MLA, APA, Chicago, the sciences, professions, and more*. University of Chicago Press.

Italics are employed to ensure that each entry contains a book, dissertation, or report title that is italicized, as well as the journal volume number that is italicized but not the issue number. However, if the journal is paginated independently for each issue, the issue number appears in parentheses following the volume number, according to APA-2010. Below is an instance of accurate italics.

Zhang, Y. (2012). Comparison of select reference management tools. *Medical Reference Services Quarterly*, 31(1), 45–60.

Ampersands, which “&” symbolizes, are used to replace the word “and” in reference lists. When two to seven writers are listed in a journal or book, an ampersand is added before the last author's name. However, an ampersand is absent when there are more than seven authors on a publication. Instead, only the first six writers' names are displayed, followed by a comma, three ellipsis points with a space between each ellipsis, and then the final author's name (APA, 2010). The correct example of ampersands is indicated below.

Freysteinson, W. M., Krepper, R., & Mellott, S. (2015). The Language of Scholarship: How to rapidly Locate and Avoid Common APA Errors. *The Journal of Continuing Education in Nursing*, 46(10), 436–438.

A DOI, which is a unique identification and “a path to the article’s location on the Internet” (Freysteinson, Krepper, & Mellott, 2015, p. 437), is often assigned to journal articles. The URL of the journal website homepage can be used for articles that do not have a DOI (APA, 2010). Here is an example of the DOI number.

Freysteinson, W. M., Krepper, R., & Mellott, S. (2015). The Language of Scholarship: How to rapidly Locate and Avoid Common APA Errors. *The Journal of Continuing Education in Nursing*, 46(10), 436-438. doi:10.3928/00220124-20150918-14

Citations Within The Text

When two to five writers are cited in the publication for the first time, the ampersand symbol “&” is used once the authors are cited within parentheses. Nevertheless, when the surnames of the authors come up in the text’s narrative, the word “and” is added before the final author’s name. Although the authors’ initials are used in the reference list, only their surnames are used in the text. Here are accurate examples.

Authors’ names in parentheses: It is easy for readers to achieve literacy in primary school (Pretorius & Mchet, 2004).

Authors’ names in the text narrative: Pretorius and Mchet (2004) state that it is easy for readers to achieve literacy in primary school.

The abbreviation "et al." is used in certain author citations within the text. All writers’ last names are cited in works by one to five authors at the first mention in the text. The first author’s last name followed by "et al." is used for successive citations of three to five authors. The first author’s name and "et al." appear at the beginning and throughout the text to credit work by six or more authors. When there are two authors on a publication, both names are always mentioned throughout the text (APA, 2010).

Successive citations of three to five authors: Freysteinson et al. (2015) stated that a large number of citation errors can be avoided by scanning the text.

Each citation of more than five authors: Nguyen et al. (2023) claims an optimal method exists.

Quotations of less than 40 words are enclosed in quotation marks, followed in parentheses by the author(s) name(s), publication year, and page number (marked by the abbreviation "p."). The sentence punctuation mark (period) comes after the author citation’s closing parenthesis. A freestanding block of text contains quotations of more than 40 words. The page number on which the quotation occurs in the original book is required for all quotations. An example is indicated below.

Less than 40-word citation: “a path to the article’s location on the Internet” (Freysteinson, Krepper, & Mellott, 2015, p. 437)

Citation management software (CMS) and its benefits

References and citations are obligatory parts of academic writing for every researcher and scholar. Software provides greater flexibility and efficiency for references and citations, even though they can be managed manually. According to Zhang (2012), citation management software (CMS) is defined as application software used to assist researchers and authors in

managing bibliographic content, such as collecting and exploiting bibliographic citations for research papers, articles, or other publications.

In addition, there is another definition of citation management software that “enables an author to build a library of references by entering the details of each reference in a structured format” (Parabhoi, Seth, & Pathy, 2017). The software typically includes tools for categorizing reference collections using tags or "folders," and it can produce citations, bibliographies, or references in several different referencing styles.

There are a variety of reference management tools available. Some are standalone desktop applications, while others are web-based services or even browser add-ons. In spite of that, CMS is critical and widely used by researchers for its multiple benefits. Here are a few of the most significant benefits of CMS tools, according to Zhang (2012):

Accessing

CMS functions both online and offline. Some standalone programs are downloaded and installed on computers. Their libraries are saved on computers. Therefore, users can work even when there is no Internet connection. As long as there is an Internet connection, some web-based software enables users to access it from anywhere at any time.

Collecting

There are several ways to add references to the libraries in CMS. Users can directly import references using an appropriate import filter from an online database. Thanks to the proper connection file and a remote database, researchers can conduct a desktop search of the database. Some CMSs have built-in search engines that enable users to conduct searches not only in the nearby reference library but also in distant online databases and then download the results right into the library. If a PDF file or folder of PDFs is embedded with a Digital Object Identifier (DOI), researchers can use it to create a reference by importing PDFs into the library. The PDFs' metadata will be automatically extracted.

Organizing

The library's records are organized according to a variety of criteria, in addition to group sets and groups, such as subject, format, source, and others. As a result, reference groups can be simply categorized, browsed, searched, and shared. Besides, duplicate references can be easily removed. CMS is particularly useful due to its robust PDF management features. CMS technologies enable users to read, categorize, annotate, and highlight research papers in the built-in PDF viewer using the gathered PDF articles. Users can also search for keywords in the entire text of the articles, making it very easy for them to find the information they require.

Collaborating

CMS allows users to create profiles to share research interests. The references will be made private and distributed to the general public. Only the user will be able to view references if they are made private. Also, the capacity of CMS to allow users to collaborate is quite appealing. Researchers can share references by joining existing groups or starting their own and inviting collaborators. As a result, public groups enable users to share references from all over the world. CMS combines and pools its users' paper collections, resulting in a constantly developing research database available to the general public. Hence, CMS tools provide an excellent environment for users to connect with other scholars who share similar interests.

Citing and Formatting

CMS has the ability to assist users in citing as they write. Since CMS tools work with numerous

different versions of word processors, such as Word and OpenOffice/NeoOffice, users can insert citations or footnotes from a collection into their text and format citations and bibliographies. Furthermore, certain CMS technologies make it simple for scholars to cite references by dragging and dropping them directly from the collection into a document. Users can also produce standalone bibliographies and reports with ease.

Postgraduates' use of CMS and CMS tools

The use of CMS by postgraduate students has been investigated as part of larger information or academic communication practices studies. The majority of them report modest CMS use. The majority of the biology PhD students asked by Vezzosi about their information behavior at the University of Parma did not utilize CMS, although “almost all” believed their reference management should be improved (Citation 2009, p. 71).

Academic researchers and Ph.D. students might benefit from using reference management software while doing research, since the references are appropriately written to aid writers in discovering and using them quickly and easily. For larger projects such as dissertations, theses, and research articles, employing any citation management tool is preferable to none for the majority of academics. According to Zhang (2012), the following are some of the most popular citation tools used by scholars:

EndNote is a full-text and citation organizer that facilitates building bibliographies and formatting documents in a variety of output formats. EndNote Online, originally named EndNote, is the web-based version of our well-known desktop reference management and bibliographic software.

Zotero is an open-source and free citation management software to store sources and create citations and bibliographies. It allows users to collect and save references in the library. Moreover, Zotero synchronizes and backs up stored research libraries to its website, www.zotero.org. To access and preserve data online, a user account may be quickly created. This account allows users to organize and share public or private research groups in order to cooperate with other Zotero users.

Beside the two tools mentioned, the authors would like to highlight Mendeley, which provides researchers with outstanding abilities to manage references.

Description of Mendeley

Mendeley is a set of free tools that facilitate resource discovery, collaboration, information management, and citation. Mendeley was created in 2007 in London, and its name is a combination of the surnames of biologist Gregor Mendel and chemist Dmitri Mendeleev (Hicks, 2011). In its most basic form, it is a citation manager comparable to EndNote, Refworks, or Zotero, allowing users to collect and store citations from a variety of sources using multiple techniques, extract bibliographic data, and format correct in-text citations and end-of-text references. There are two available and well-designed interfaces for users: Mendeley Desktop and Mendeley Web. Their functions are utilized to maximize their outstanding benefits as a powerful social networking tool for well-organized reference storage, closer collaboration among public groups, and user-friendly citing or formatting.

Mendeley has designed two platforms for reference managers, a desktop software and a web-based storage space, which can be used separately or synchronized. The libraries can be accessed online via the website, via a mobile app as long as an Internet connection is available, or offline via a desktop utility. Mendeley is compatible with Windows, Mac, and Linux operating systems and can produce bibliographies in Microsoft Word, OpenOffice, and LaTeX.

On the desktop, Mendeley supports drag-and-drop or manual entry of PDFs or other documents into a user's database, and it integrates with word-processing applications like Word to help integrate citations into a paper and produce reference lists in a number of formats. Mendeley on the web provides for the effortless collection of web pages, journal articles, and other materials using a web importer when the user finds them through Google or Google Scholar. Overall, Mendeley is a valuable resource for both researchers and students.

Table 3.

Quick glance at Mendeley

Means	Mendeley
Platforms	Mac, Windows, Linux
Browsers	IE, Firefox, Chrome, Safari
Browser plug-ins	IE, Firefox, Chrome, Safari
Mobile apps	Android, iOS
Word processing integration	Microsoft Word (Windows and Mac), LibreOffice (Linux, Mac, and Windows)
Importing references	BibTeX, EndNote, XML, RIS, Zotero library, txt, Ovid (Medlars reprint), PubMed/MEDLINE (nbib), Mendeley web catalog

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6013132/>

Research Question

The study tries to address this specific research question:

What are the perceptions of postgraduate students towards the use of Mendeley for managing citations in academic writing?

Methods*Research setting and participants*

This study aims to investigate Mendeley's utilization among linguistics postgraduates at Hanoi University of Industry. The research was carried out when all the selected postgraduates were in the second semester of their master's program. The students were chosen randomly to approach a large number of students from various ability levels so that their comprehension of the examined issue was enriched and expanded.

The research was conducted at the School of Languages and Tourism (SLT), Hanoi University of Industry (HaUI). The target population included 20 English linguistics postgraduates and 25 Mandarin postgraduates. Before enrolling in master program at HaUI, participants were students from diverse universities in Hanoi, for instance Hanoi University, University of Languages and International Studies,

Data collection and analysis

The quantitative data for this inquiry came from two online survey questionnaires that were designed using Google Forms and sent to participants to examine their attitudes before and after Mendeley's intervention. The first survey included six closed-ended questions concerning personal information and their first opinions regarding Mendeley. Then, data are collected from

the responses of all participants via a Likert-scale survey with five options ranging from fully disagree, disagree, neutral, and agree to fully agree.

After that, in-depth interviews were conducted to go deeper into the issues of perceived Mendeley usability and utility. According to Eppich et al. (2019), in-depth interviews offered interviewers and interviewees space and time to adequately investigate topics. Due to the participants' availability and willingness to participate, a modest sample size was chosen (Creswell, 2002). To identify the main themes, the replies were transcribed and qualitatively examined. Both qualitative and quantitative data were subjected to data interpretation to draw a conclusion.

Research procedure

Two surveys (pre- and post-intervention surveys) were employed in this study. In the first step, the researchers designed a 7-question pre-test in which data was collected via Google Form, comprising closed-ended and open-ended questions. The questionnaires aimed to assess participants' perceptions of Mendeley's usefulness as a reference management tool, its ease of use, and their current difficulties when using or not using citation tools to manage references.

In the next step, the researchers held a workshop for one hour to train all participants to use Mendeley, following these items:

- How to download and install Mendeley, and Mendeley Web Importer on laptop
- How to select references and import to Mendeley manually or from the web page via Mendeley Web Importer
- How to classify references to different categories
- How to use Mendeley Cite to insert auto-formatted citation and create bibliography on Word
- How to change and select proper citation style for articles

In the final step, the researchers carried out the post-test for the graduates after three weeks of applying Mendeley to writing essays and assignments. After designing qualitative questions with five options (fully disagree, disagree, neutral, agree, and fully agree) following the Likert scale (a research scale used to measure attitudes and opinions) (Liando et al., 2022), statistics are collected from the responses of 45 postgraduate students. The questionnaires included two parts, with the first addressing not only the participants' perceptions of Mendeley's usefulness and efficiency but also their satisfaction with and willingness to use Mendeley. In the second part, the study also gathered information on factors that may influence or hinder the use of Mendeley, such as computer literacy and familiarity with alternative reference management tools. The collected data will be analyzed descriptively and presented in tables, graphs, and charts.

Regarding interviews, semi-structured interviews were conducted with 12 random students voluntarily to further investigate their own experience of Mendeley's utility. The researchers encouraged them to share the factors that trigger difficulties when applying Mendeley to academic writing as well as their recommendations for spreading the use of Mendeley at school. The end of the interview saw the insights into how Mendeley contributes to the academic writing endeavors of linguistics postgraduates at Hanoi University of Industry.

Findings and discussion

Students' habits of handling citations

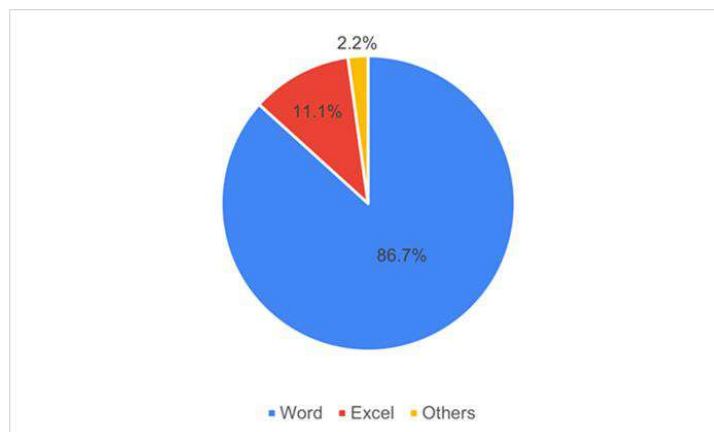


Figure 1: Students' current citations and references management tools

The figure above illustrates that before the Mendeley training session, most postgraduate students chose to manage citations and references via Microsoft Office. It is evident that a significantly higher proportion of people (86.7%) utilize Microsoft Word than Excel (11.1%) when it comes to organizing citations. This indicates that the majority of users probably favor Word as their tool of choice for adding citations and building bibliographies. This finding is consistent with that of Agustini (2021), who indicated that students often use Microsoft Word to manage their citation. Word has a variety of built-in citation and reference management capabilities, which may be one factor contributing to this tendency (Mukhedkar, 2021).

For the method of writing references, most simply, the “Add Files” icon in the “References” menu of the “Microsoft Word” program can be used. Conversely, Excel could be a helpful tool for specific citation management tasks, such as managing voluminous citation-related data or monitoring sources over time (Agustini, 2021). The fact that fewer people (11.1%) use Excel than Word for managing citations, however, raises the possibility that users may not consider Excel to be the best option for this task. Only 2.2% of postgraduate students opt for other methods of managing citations and references. However, it is important to remember that even though Word may be a well-liked program for managing citations, it might not always be the ideal option. Previous studies have shown that Microsoft Word is inadequate for handling a sizable database of citations or for collaborating on research projects. Moreover, they have to add references manually, which can be time-consuming (Mukhedkar, 2021).

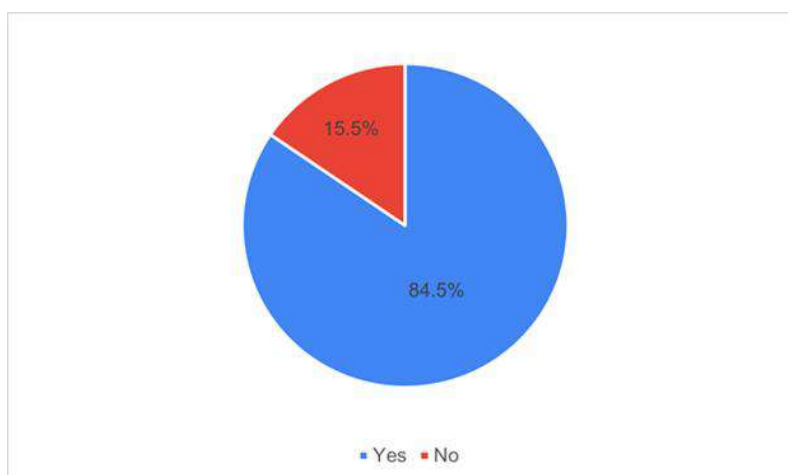


Figure 2: Students responses on difficulties managing citations and references using current methods

The figure above shows that a significant majority of postgraduates encounter challenges in using their current methods, as mentioned in Figure 1, to manage citations and references in academic writing. The reported difficulty rate of 84.5% indicated that these methods are not user-friendly, readily comprehensible, or efficient for the majority of postgraduates. Consequently, inaccurate or missing citations could affect their publications' quality. In contrast, only 15.5% of postgraduates reported no issues with manually managing their references and citations. The numbers demonstrate the need for alternative, more efficient approaches to reference management that enable postgraduates to optimize their efforts to organize, cite, and reference their work. Automated reference management tools and academic citation software can offer viable alternatives to manual processes, thereby enhancing precision, productivity, and efficiency. These findings further support the idea that postgraduate students face challenges with managing citations using manual methods or basic software like Microsoft Word (Mhokole & Kimaryo, 2022).

Students' perceptions towards CMS tools before the integration

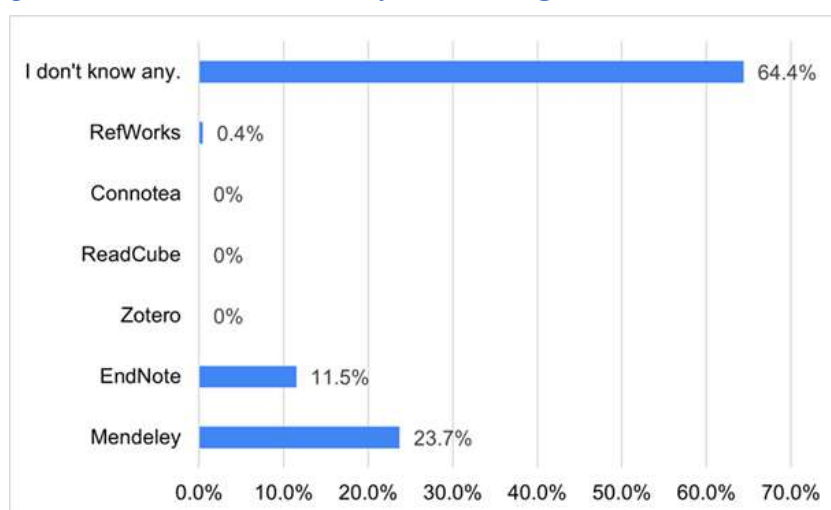


Figure 3: Students' awareness of some CMS tools

From the results of the data presentation above (figure 3), it can be seen that the majority of students have no idea about applying CMS to their academic writing, accounting for nearly 65%. Even though citations play a prominent role in research, students are not equipped with sufficient knowledge about how to manage them effectively. The statistics reflect a lack of awareness or training on the importance and use of such software. Of the citation software programs listed, Mendeley seems to be the most well-known among the students surveyed, with 23.7% being familiar with it, followed by Endnote, which accounts for 11.5%. Interestingly, Zotero, ReadCube, Connotea, and RefWorks each had a familiarity score of 0-0.4%. Further research conducted by Butros and Taylor (2010) also indicated that while software like Mendeley and EndNote are recognized tools, they are underutilized by students due to a lack of knowledge and training.

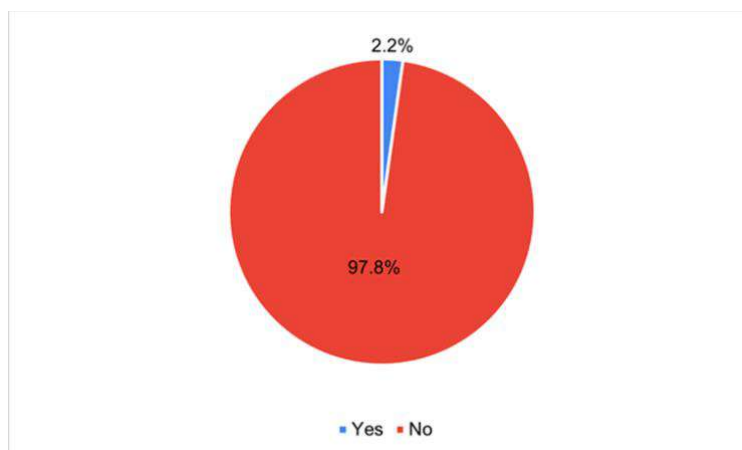


Figure 4: Students' experience of CMS utilization

Figure 4 shows the utilization of CMS among postgraduates. Since the authors' previous analysis, little knowledge about CMS has been gathered. Approximately 100% of the students surveyed have never used citation management software. This is surprising as Mendeley, as well as the rest listed above, is a popular free and open-source reference management software and highly regarded citation tool used by academics and researchers.

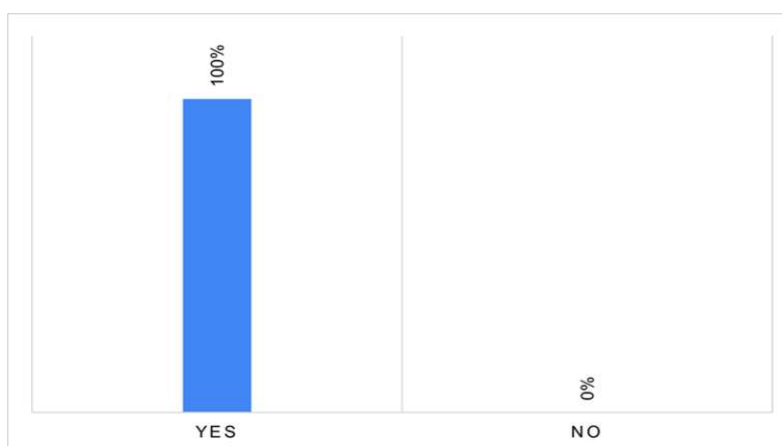


Figure 5: Student's willingness to attend a training session about using Mendeley

According to the figure provided, it appears that all postgraduate students who participated in the poll were interested in enrolling in a training session on using Mendeley to manage citations and references automatically. The result indicates that multiple postgraduate students are excited about adopting technology to facilitate their academic work (Phan, 2023; Vu, 2022) and need to have competencies regarding reference management to benefit from CMS training (Iskandar & Patak, 2019).

Overall, it is evident that postgraduate students appreciate citation management software in their academic work and are prepared to put in the time and effort necessary to become proficient users of such programs. This leads to a strong urge to provide students with proper materials, resources, and training courses to equip them with the skills essential to utilizing these innovative tools effectively in their academic endeavors.

Students' perceptions towards Mendeley after the integration

In response to the study question, "What are the perceptions of postgraduate students towards the use of Mendeley for managing citations in academic writing?" The researchers invited 10

volunteers to join the interviews. The interviewees included three female English majors (participants 1, 2, 3), three male English majors (participants 4, 5, 6), and four female Mandarin majors (participants 7, 8, 9, 10). After that, based on the analyzed data, an online survey was conducted to investigate the comprehensive attitude of all participants towards the use of Mendeley in depth.

When questioned about their affection for using Mendeley to handle citations, most participants indicated that they prefer using it for their academic writing. It was specified as (1) user-friendly, (2) free of charge, (3) easy to collect and track data (4) good online/offline storage, (5) easy to create and custom reference styles (6) immediate updates, (7) convenient to import references to Mendeley library, (8) convenient to integrate with Microsoft Word, (9) easy access to full-text articles, (10) save time, (11) easy to cite/ provide references, (12) automatically generate bibliography, (13) easy to download and install.

User-friendly and free of charge

The analysis of in-depth interviews with 10 participants revealed that Mendeley is a popular citation management tool among researchers due to its user-friendly interface, cost-effectiveness, and reliability. Participants universally appreciated Mendeley's easy-to-use interface and free pricing structure. Participant 1 shared, *"I absolutely love using Mendeley to manage my citations because it's incredibly easy to use, even for a beginner like me."* Participant 6 said: *"I really appreciate that Mendeley is completely free of charge, which saves me money compared to other citation management tools."*

Easy to collect, track and store data online and offline

Participants noted that Mendeley's data collection and tracking capabilities and reliable online and offline storage options helped them stay organized and efficient while conducting research. As mentioned by participants 8, 9, and 10, they really enjoy using Mendeley to manage my citations because it is easy to keep everything organized and accessible. Whenever they come across a newspaper or article, they can easily add it to their library and categorize it for later use. Besides, participants reported capturing important information from research papers by highlighting it directly on the pdf files.

Easy to cite/provide references and save time

With respect to participants' fondness for using Mendeley to manage citations, some of them confirmed that it helps them to cite references automatically and save time. As Participant 7 explained, *"The software downloaded quickly and didn't require any complicated setup or technical expertise on my part."* Furthermore, Mendeley's seamless integration with Microsoft Word, automated citation system, and easy access to full-text articles helped improve researchers' productivity and eliminate many tedious tasks associated with academic writing.

When it comes to difficulties, the data show that individuals confront a number of significant obstacles when using Mendeley. The majority of participants mentioned language difficulties, indicating that the software may be difficult for users who are not proficient in English or academic terminology. For instance, *"I found the language used in Mendeley, which is English, quite challenging because I major in Chinese,"* claimed participant 7 in the interview.

Participants were also concerned about the lack of technical proficiency and subpar institution-provided instruction, which were delaying their research project. Participant 9 stated: *"Poor technical proficiency and insufficient training are really challenges to my effectively using the software."*

As recorded from the responses of the majority of participants, the lack of training on citation

styles and the absence of some citation styles were sources of their frustration. For example, participant 1 noted, *“I found certain citation styles missing [...]. In addition, I struggled to understand specific citation formats that were unfamiliar to me.”*

Lastly, several participants reported having trouble with sophisticated features such as adding references manually as well as installing and adding plugins. Take the responses of participants 3 and 10 as an example.

“As a non-technical person, I don’t know how to install and manage plugins effectively, and I sometimes run into problems while manually inserting references.” (Participant 10)

“Although Mendeley includes many valuable capabilities, they can be difficult to use without adequate installation and organization”. (Participant 3)

These issues demonstrate the need for more streamlined software solutions with adequate training and support channels. Institutions can help by providing improved documentation, training courses, and workshops to make Mendeley more accessible and effective for all postgraduates.

According to the data provided by the participants in the interviews, attending training courses and workshops to encourage the use of Mendeley for research and academic writing is essential. As highlighted in their comments, such programs assist in improving the quality of academic writing (Participant 1), reducing stress during academic writing tasks (Participant 2), saving time (Participant 5), increasing productivity (Participant 6), and providing students with the skills and techniques required for effective literature review, source management, and citation formatting (Participants 4, 7, 8, and 9). Several participants emphasized the importance of technological improvements in academia and the use of software tools such as Mendeley (Participants 3, 5, 8). Furthermore, they stated that organizing training courses and workshops on this program can serve as a stepping stone for enhancing research and writing abilities (Participant 10). These findings support previous investigations highlighting the relevance of digital literacy in academic achievement (Bhuasiri et al., 2012) and the use of reference management software such as Mendeley.

After analyzing the data from interviews, an online survey was sent to all participants, which apparently provides a deeper and more comprehensive investigation into students’ attitudes towards the use of Mendeley. Data also revealed some challenges that participants faced when using Mendeley.

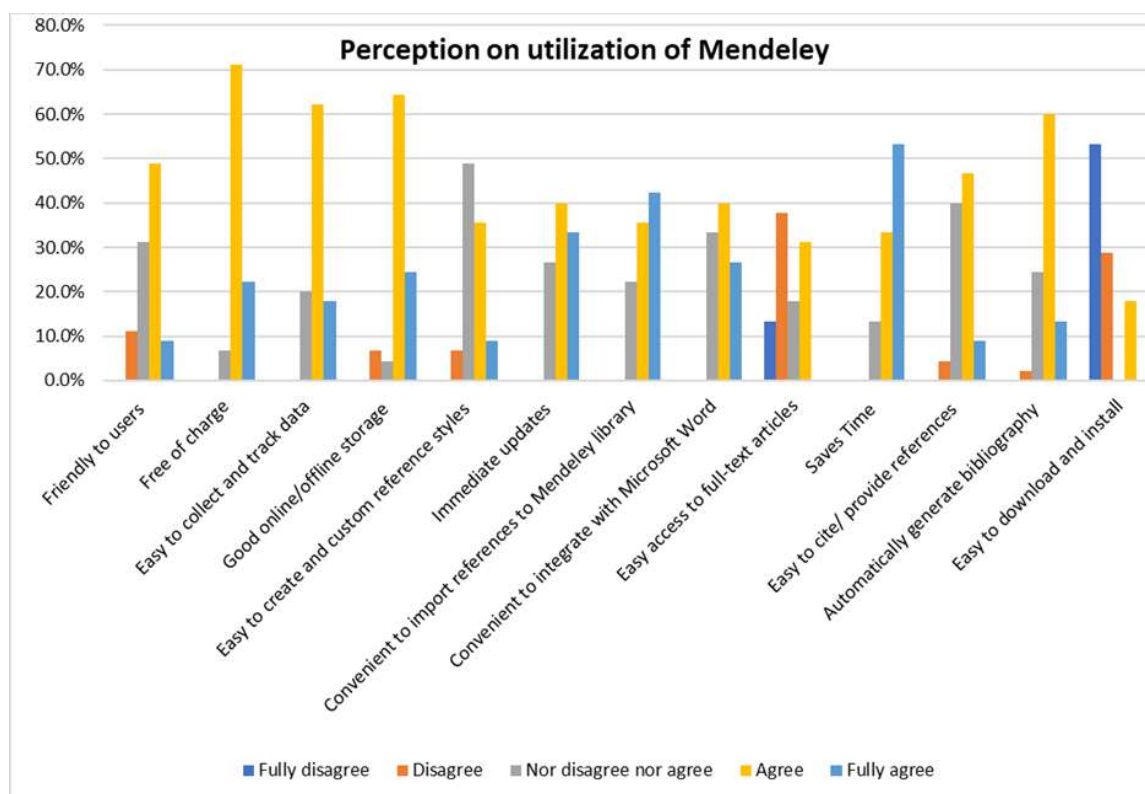


Figure 6: Students' perceptions on utilization of Mendeley

The graph provides insights into postgraduates' perceptions of Mendeley's utilization based on various aspects. Many postgraduates thought Mendeley had a friendly interface for users, with 62.2% of respondents agreeing. The tool's cost is another favorable aspect, as the majority of participants (93.3%) agreed and fully agreed that it is free of charge. This indicates a positive perception, as the absence of financial barriers is attractive to postgraduates, particularly those with limited resources.

Mendeley is also perceived to have good features that make it easy to collect and track references, with 62.2% agreeing and 17.8% fully agreeing. The online/offline storage functionality is well-regarded, with 64.4% agreeing and 24.4% fully agreeing. Furthermore, Mendeley is seen as effective in saving time, with 33.3% agreeing and a significant 53.3% fully agreeing. Additionally, the tool is perceived as facilitating easy citation and reference provision, with 46.7% agreeing and 8.9% fully agreeing. Generating a bibliography is also viewed positively, with three-fifths of participants agreeing and 13.3% of them fully agreeing. However, there are areas for improvement, such as the ease of download and installation, with which 53.3% fully disagreed.

Overall, the data suggests that postgraduates have a largely positive perception of Mendeley and its utilization, including its ease of use, cost-effectiveness, useful features, efficient storage, time-saving capabilities, and assistance in citation and bibliography generation.

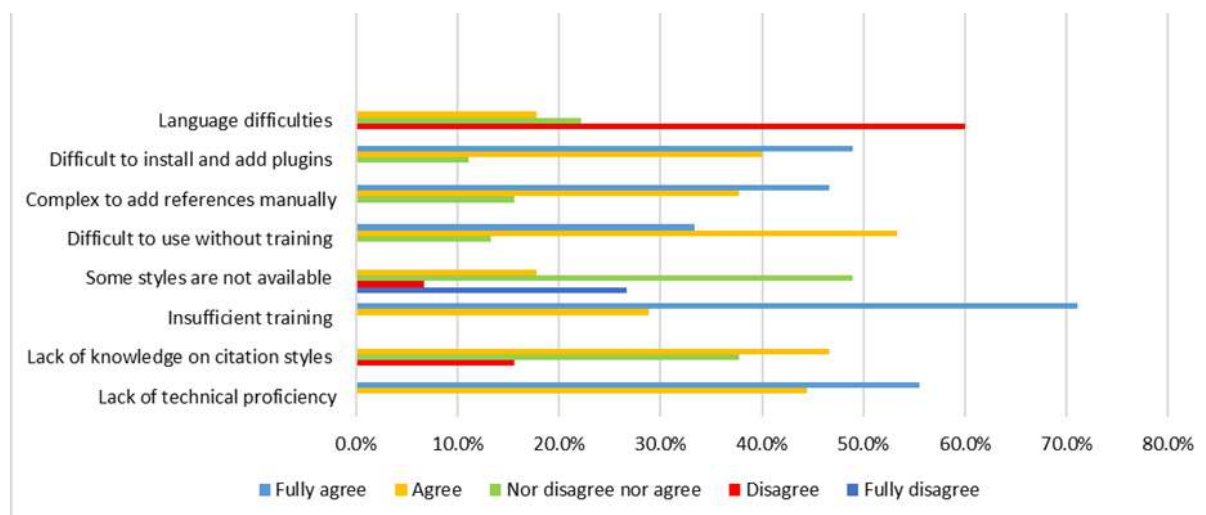


Figure 7: Challenges associated with the use of CMS

Based on the data presented, it appears that using Mendeley poses several challenges. The majority of respondents (71.1%) indicated that insufficient training is a problem, and 44.4% and 55.6% fully or partially agreed with the lack of technical proficiency. While nearly 60% disagreed that language difficulties posed a challenge, a significant proportion of respondents (48.9%) agreed and fully agreed that installation and adding plugins were difficult. Learning to use Mendeley software on their own was also problematic when more than half of the respondents (53.3%) agreed that the software was difficult to use without training. Additionally, 46.7% felt they lacked knowledge of citation styles, which may trigger more difficulties when adding references manually. Finally, almost one-fifth of the participants (17.8%) experienced problems due to missing citation styles. This feedback is based on the in-depth interview section, and the results are revealed below.

The findings from both the online survey and interviews reveal a comprehensive view of postgraduate students' attitudes towards Mendeley and the challenges they face when using the software. This finding aligns with other research that emphasizes the growing popularity of Mendeley among students and researchers (Gilmour & Cobus-Kuo, 2011). As reflected in this study, one of Mendeley's greatest strengths aligns with other research indicating that Mendeley's automation of citation generation and bibliography creation makes it a preferred tool for researchers aiming to streamline their academic writing process (Lorenzetti & Ghali, 2013).

However, the study also reveals challenges, such as language barriers and a lack of technical proficiency, which hinder some students' ability to fully leverage Mendeley, which was already mentioned in previous studies (Bhuasiri et al., 2012; Nitsos & Chamouroudi, 2022). These findings also underscore the need for academic institutions to promote the use of Mendeley by providing adequate training through workshops or courses, as suggested by both the participants in this study and by other scholars like Nitsos and Chamouroudi (2022). Incorporating structured training programs can significantly enhance students' ability to manage citations effectively and improve their overall academic writing quality.

Conclusion

This research aimed to explore postgraduates' perspectives and attitudes regarding using Mendeley in academic writing at a Vietnamese institution. According to the research's findings, postgraduate students hold favorable opinions about Mendeley, viewing it as a helpful tool for

organizing references. Most students found the software easy to learn, which is crucial for maintaining an efficient workflow. The software's functions also speed up the research process by allowing users to input references from a variety of sources and automatically create bibliographies. However, participants also experience technical difficulties when using Mendeley, suggesting that developers and instructors still have work to do in terms of support and development.

Overall, the study provides valuable insights into the potential benefits and challenges of using citation management tools like Mendeley in academic writing. The findings suggest that Mendeley can foster better writing practices and help writers manage references more quickly, which is important for postgraduate students who must juggle the demands of their schoolwork, research projects, and personal lives. The study emphasizes the need to integrate these tools into university academic writing curricula.

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Genre Analysis of Law Research Article Abstracts and Application in Legal Writing Teaching

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ABSTRACT

Keywords: legal discourse, rhetoric analysis, move-step analysis, research articles' abstracts

Investigating the rhetorical structure of law research article (LRA) abstracts is essential for researchers and instructors in legal writing. Despite their significance in academic discourse, the specific rhetorical strategies used in LRA abstracts remain underexplored. This study examines the rhetorical moves in English LRA abstracts using Hyland's framework. Fifty LRA abstracts, randomly selected from the Journal of East Asia and International Law and Law in Context, both of which are indexed in Scopus and ISI Web of Science, were analyzed as the corpus. The research employed a qualitative content analysis approach to identify and categorize the rhetorical moves. The study reveals that the purpose and introduction moves are the most prevalent, underscoring the importance of clearly stating objectives and establishing context. The product and conclusion move, which summarize key findings and extend research implications, follow in prevalence. In contrast, the method move appears less frequently, reflecting the genre's focus on legislative analysis rather than detailed methodologies. These findings are valuable for law researchers aiming to publish in international law journals and contribute to a broader understanding of genre analysis in legal writing. The study offers practical implications for scholars and educators, enhancing the effectiveness of legal academic communication.

Introduction

The analysis of rhetorical structures has been playing such an important role the field of law where precision and clarity are paramount. Law research articles (LRAs) are considered to be extremely useful for legal scholars to present their interpretations as well as arguments in the legal community. However, in the law field, the specific rhetorical strategies used in LRA abstracts have not been explored yet, especially in comparison to other areas such as engineering and applied linguistics (Hyland, 2000; Pho, 2009). Therefore, there is a need for a

focused study on the genre analysis of LRA abstracts because LRA abstracts are places where the research content is summarized and thus having a big influence on reader engagement.

Despite the significance of abstracts in LRAs in summarizing the content and presenting the authors' argumentations and persuasions, there is still a notable gap in investigating the specific rhetorical strategies employed in LRA abstracts. Internationally, there have been numerous studies about rhetorical patterns that have extensively analyzed research article abstracts across various disciplines (Cao, 2018; Van Bonn & Swales, 2007). In the context of Vietnamese academic writing, the research tend to emphasize on aligning local research practices with international standards to enhance publication success (Do, 2016a). However, there are limited research that investigate the rhetorical patterns employed in LRA abstracts. Thus, it is timely and necessary to conduct the research for rhetorical strategies in LRA abstracts. In the scope of this paper, facets associated with the structure, rhetorical moves, and linguistic features of law research articles' abstracts will be analyzed, utilizing Hyland's (2000) framework. Fifty LRA abstracts from prominent law journals have been selected for the research in order to analyze the structural patterns and linguistic features in LRA abstracts.

The study is hoped to be beneficial for law scholars desiring to publish their work in international journals by enhancing the visibility and impact of their research using effective rhetorical structures. Additionally, the results of the study can be used for the instructors who take responsibility of teaching legal writing by applying successful rhetorical strategies employed in LRA abstracts.

Literature review

Genre analysis and its application in ESL teaching has been increasingly conducted in order to grasp the structure and linguistic features of various academic genres, including research articles. Recent studies continue to build on foundational works from the 1980s and 1990s, such as Swales (1990) and Hyland (2000), while also incorporating contemporary perspectives on genre dynamics in academic writing (Amnuai, 2019; Cao, 2018). Genre analysis was first investigated during the 1980s as an area of ESP. At that time, genre analysis was applied in scrutiny of learners' writing in terms of rhetoric (Paltridge, 2007). Swales (1990) defined "genre" as "a class of communicative events, the members of which share some set of communicative purposes" (Swales, 1990, p. 58). In this study, he emphasized the importance of delineating the rhetorical structure of genre moves within the field of genre analysis.

The reason for which Hyland's (2000) move model has been chosen for the research is that it analyzed rhetorical patterns comprehensively across various disciplines. Additionally, this model provides a clear structure of five moves: Introduction, Purpose, Method, Product, and Conclusion. Other models such as Santos's (1996) and Bhatia's (1993) can be applied to conduct rhetorical analysis. However, Santos's model emphasizes a four-move structure similar to IMRD (Introduction, Method, Result, Discussion), while Bhatia's model does not include the Purpose move.

As for move-step analysis in research articles, Swales, who was pioneered in this realm, emphasized on the structure of RA introductions (Swales, 1981, 1990). After Swales, there

have been numerous studies delved into the discourse of RAs in terms of move structures. Recent research continues to explore these structures, highlighting their relevance in understanding disciplinary conventions (Samraj, 2019; Amnuai & Wannaruk, 2013). The findings of these studies have been applied in both reading and writing classes (Askehave & Swales, 2001). A genre analysis move is described as a "discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse" (Swales, 2004, pp. 228-229). Each move functions as a distinct role and communicative purpose and aim at contributing collectively to the overall purpose of the text (Pho, 2009). Moves may be obligatory or optional within a genre. The question of whether abstracts that do not follow Hyland's model are qualified depends on the context and specific requirements of the academic community. Abstracts that deviate from this structure may still be valid, reflecting the flexibility and evolving nature of academic writing (Bhatia, 2012; Al-Khasawneh, 2017). Therefore, it is necessary to focus on linguistic features to aid in identifying moves and their boundaries. For that reason, there have been a great number of studies on research article feature conducted in terms of genre analysis (Swales, 2004).

Genre analysis of research article sections has been increasingly attracted numerous authors. Initially, authors have focused on the structural arrangements of the introduction section. When extensively examining the introduction section of RAs across various disciplines, Swales (1981) identified four fundamental move structures, including 1. Establishing the research field, 2. Reporting prior research, 3. Preparing for present research, and 4. Introducing present research (Swales, 1981). Then this structure was modified with a three-move pattern called the Create-a-Research-Space Model (CARS), including 1. Establishing a territory, 2. Establishing a niche, and 3. Occupying the niche (Swales, 1990). The Swale's model has been subsequently applied in studies on introduction structure with revised CARS models (Amnuai, 2019; Amnuai & Wannaruk, 2013; Bhatia, 1997; Lim, 2006; Samraj, 2005). Likewise, Tessuto (2015) examined generic structure and rhetorical moves in English-language empirical law research articles, highlighting interdisciplinary and interdiscursive cross-over in legal discourse (Tessuto, 2015). After that, there have been numerous researchers have conducted move-step analyses on the results, discussion and conclusion sections, emphasizing on cultural variations in move sequences and implication in the teaching methodology (Cao, 2018; Do, 2014, 2016a, 2016b; Ruiying & Allison, 2003).

When it comes to genre analysis of RA abstracts, there have been vast number of research works conducted with the aim at helping readers select appropriate readings (Çandarlı, 2012; Lorés, 2004; Pho, 2009). These authors have utilized a model comprising five moves, including situating the research (M1), presenting the research (M2), describing the methodology (M3), summarizing the results (M4), and discussing the research (M5) and indicated that M2 and M3 are essentially obligatory moves in the genre. Additionally, other studies have conducted genre analyses using either the CARS or IMRD model. For instance, Lores (2004) conducted a genre analysis on a corpus of thirty-six RA abstracts in the field of linguistics. The results revealed that approximately 61% of the abstracts adhered to the IMRD model, around 31% followed the CARS model, and about 8% employed a combination of both (Lorés, 2004).

In addition, there have been numerous studies focusing on contrastive rhetoric in RA abstracts.

Candarh (2012) scrutinized the rhetorical differences between Turkish and English research abstracts, employing Swale's (2004) move analysis model. Candarh (2012) supposed that cultural variance and differing scientific community expectations are factors leading to the difference in the frequency of Move 2. Similarly, Marefat & Mohammadzadeh (2013) conducted contrastive analysis between English and Persian native speakers' research abstracts in literature using IMRD and CARS models. The study indicated that literature abstract writers tend to pay attention to Introduction and Results sections but are less likely to focus on the Method and Discussion sections (Marefat & Mohammadzadeh, 2013). In another study by Ismail & Shah (2014), the rhetorical structure of abstracts from Islamic research articles authored by Malaysian writers were investigated using IMRD and CARS frameworks. The study showed that most of the abstracts employed CARS model (Ismail & Shah, 2014). Moreover, a study by Abarghooeinezhad & Simin (2015) investigated the rhetorical structure variance in research article abstracts penned by native and non-native English speakers (Iranian) in Electronic Engineering by using Santo's (1996) framework and AntMover software. The study identified variations in moves, verb tense, and voice between native and non-native English speakers (Abarghooeinezhad & Simin, 2015).

In conclusion, approaching to RAs has been investigated in facets of genre analysis, move-step analysis as well as contrastive rhetoric analysis. To address potential deviations from established models, this study also considers the flexibility in abstract structure across different journals and disciplines. It acknowledges that while Hyland's model provides a useful framework, variations may exist, and these deviations can still produce effective and well-structured abstracts (Swales, 2019). The investigation has been being conducted in whole RA, every sections of RAs as well as abstract sections in sectors related to accounting, applied linguistics, literature. However, exploration of linguistic features of both law RAs as well as law RA abstracts has still been a big gap, so it is really essential to conduct research on this area. In the scope of this paper, genre analysis of law RA abstracts will be examined with the aim at grasping the structure, rhetorical moves, and linguistic features.

Research Questions

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

1. What are the rhetorical moves in English LRA abstracts and how frequent are they?
2. What are the most frequent linear move patterns?

Methods

Theoretical framework

In terms of models for move analysis, there are Santos's (1996) model, Bhatia's (1993) model, Hyland's (2000) model. Santos's (1996) model is quite similar to Hyland's (2000) model, but it was conducted on 94 abstracts in applied linguistics (Santos, 1996). Bhatia's (1993) model includes four moves: Introduction, Method, Result, Discussion (IMRD), which means not including Purpose move (Bhatia, 1993). In this research, Hyland's (2000) model comprising

five moves: Introduction, Purpose, Method, Product, and Conclusion has been employed. The reasons for which Hyland's (2000) model has been applied is that Hyland's model was derived from a broader analysis of 800 abstracts spanning eight scientific and social science fields (Hyland, 2000). Besides, Hyland's framework has been significantly prevalent for employment in abstract analysis across various research studies.

Although this research has employed Hyland's model, other models such as Santos's four-move structure and Bhatia's IMRD model were also reviewed. In cases where abstracts do not adhere strictly to Hyland's model, the study remains flexible in its analysis, recognizing that variations may reflect unique disciplinary norms or journal-specific conventions. These abstracts are still evaluated based on their effectiveness in conveying the research objectives, methodology, and findings (Swales, 2019; Samraj, 2019).

Table 1.

Hyland's (2000) Move Model

Move	Function
Introduction	Establishes context of the paper and motivates the research or discussion.
Purpose	Indicates purpose, thesis or hypothesis, outlines the intention behind the paper.
Method	Provides information on design, procedures, assumption, approach, data, etc.
Product	States main findings or results, the argument, or what was accomplished.
Conclusion	Interprets or extends results beyond scope of paper, draws inferences, points to applications or wider implications.

Source: (Hyland, 2000)

As for the identification of moves in research article (RA) abstracts, aspects related to move occurrence, pattern, and linguistic structure and pragmatic will be examined in order to conduct analysis.

Data collection & analysis

In terms of data collection, this study analyzed 50 English research article abstracts selected from two reputable open-access journals indexed in Scopus and ISI Web of Science: the Journal of East Asia and International Law and Law in Context from the period from 2020 to 2024. Specifically, 25 abstracts have been extracted randomly from Journal of East Asia and International Law and 25 abstracts have been extracted randomly from the journal of Law in Context. These abstracts were systematically identified and numbered for subsequent analysis, with each abstract assigned a unique identifier reflecting its language and sequence, such as LRA1 for the law research article abstract 1.

Based on Hyland's model, the presence and frequency of the five moves have been coded. In the study, both qualitative content analysis and quantitative frequency analysis have been employed in order to identify rhetorical strategies employed in LRA abstracts.

Table 2.

Data for the research

Journal	Number of abstracts
Journal of East Asia and International Law	25
Law in Context	25
Total	50

Results

The frequency of moves in the abstracts has been illustrated in the Table 3 below:

Table 3.

Frequency of Moves Found in the law research articles' abstracts

Move	Frequency	Percentage
<i>Introduction</i>	46/50	92%
<i>Purpose</i>	48/50	96%
<i>Method</i>	20/50	40%
<i>Product</i>	37/50	74%
<i>Conclusion</i>	34/50	68%

Table 3 illustrates the frequency as well as its percentage of each move in the surveyed abstracts. It can be clearly seen that the purpose move is considered the most prevalent move with 48 abstracts having this section and accounting for 96% of total surveyed data. Similarly, the introduction move also makes up the significant proportion in the surveyed data with the percentage of 92%, which means there are 46 abstracts consisting of this section. Additionally, there is a considerable number of abstracts having product move, which account for 74% in the researched data. This figure is followed by the percentage of the conclusion move with 68%. In contrast, the percentage of the method move just makes up a comparatively modest figure with only 20 abstracts having this section. This means that the law researchers are less likely to follow the five move structures of the conventional abstracts.

The prevalence of the purpose move indicates that the research objectives play such an important role in establishing the relevance and significance of the study LRA abstracts. The frequency of the introduction move reflects the importance of contextualizing the research within existing legal frameworks and debates. In contrast, the less frequency of the method move suggests that law scholars are more likely to focus on legislative analysis rather than methodological details. Finally, the product and conclusion moves which account for 74% and

68% of the abstracts respectively expresses the role of summarizing key findings and implications in LRA abstracts.

These results are quite completely different from the findings in the research conducted by Al-Khasawneh (2017) about “*A genre analysis of research article abstracts written by native and non-native speakers of English*”. Specifically, the research by Al-Khasawneh showed that the purpose move, the product move and the method move are three moves that occurred in all abstracts about Literary Studies and Applied Linguistics by both native and non-native speakers of English while introduction move and conclusion move just accounted for much more small proportion (Al-Khasawneh, 2017). It can be said that the field of study by more and large have the big influence on the occurrence of moves in research article abstracts.

The move of introduction

As it can be seen from table 3, the introduction move ranks second with 46 abstracts having this move, accounting for 92% in total, so it can be believed that the introduction move is the compulsory move in the abstracts. In terms of lexical features, this move is usually realized by present perfect tense together with discourse markers such as *although, despite, but ...* in order to describe the current issues and the demand for conducting the research to suggest resolutions for the problem. Additionally, through investigating the data, it can be seen that the authors tend to begin their abstracts with the introductory section, which is quite similar to the traditional structures of the research articles’ abstracts in the previous studies. As for the role, the introduction move is considered beneficial for the law researchers to convey the contemporary social situations as well as the limitations of the regulations in dealing with these situations and therefore it is necessary to conduct the research for the issue. In addition, the introduction move is considered to help authors attract the intention from the potential readers. The result is contrast with the previous studies about abstract structures. Specifically, the studies by Ismail & Shah (2014) about abstracts in Islamic Social Sciences Journals and by Abarghooeinezhad & Simin (2015) about abstracts in Engineering Journals indicated that setting the background of the research through the introduction move just made up a relatively tiny percentage in the surveyed data (Abarghooeinezhad & Simin, 2015; Ismail & Shah, 2014). This can be explained that contextualizing the current social circumstances and raising the restrictions of the contemporary legislation is deemed to useful to persuade and attract the potential readers. This is the reason why the introduction move is really necessary and nearly a compulsory factor in research abstracts about law.

The move of purpose

Surprisingly, the purpose move is the one occurred nearly all the surveyed abstract with 48 abstracts having this move and made up the highest figure with approximately 96% of the total moves. Therefore, purpose move is considered to be a core move in the abstracts about law and have tendency of following the introduction move in the abstracts. As for the lexical features, this move is often realized by descriptive structures such as *This research / This article / This paper identifies / examines / attempts / dissects / responds to / embraces / reviews / addresses / explains / summarizes / analyses / criticizes / aims to / exemplifies / proposes / provides / discuss / outlines / seeks / considers / ...* or purposive structures such as *The authors aim to analyze ...;*

The purpose of this article is to address ... ; The overall aim of the study was to explore ... together with discourse markers such as *thus, therefore, hence ...* In the surveyed law research articles, the purpose move has been employed in order to clearly state the main objectives of the research. Additionally, this move is also to explain the significance of the study and its contributions to the current legislation and help the reader to have a deep understanding of the specific field of law.

This finding is quite consistent with the previous studies in terms of genre analysis of abstracts. Specifically, this result is quite similar to the study by Van Bonn & Swales (2007) about the structure of abstracts in linguistic journals and the study by Al-Khasawneh (2017) about the abstracts in the Applied Linguistics field. These studies indicated that the purpose move is the compulsory one in the abstracts (Al-Khasawneh, 2017; Van Bonn & Swales, 2007). However, law research authors tend to mention the purpose move after the introductory section, which is quite different from the previous researches which state that the purpose are more likely to be situated at the beginning of the abstracts. As mentioned in the previous analysis, this can be explained that the introductory part about the current social situation as well as contemporary legislation has been playing such an important role in law research articles' abstracts. This is the reason why the law researchers tend to present the introduction move before presenting the purposes of their researches.

The move of method

Methods have significant roles in conducting law research academically. In the investigated data, the method move often describe the research methodology employed in the study. In more details, this move provide an overview of the research methods and approaches to address the research issues raised in the introductory part. In addition, this move also mentioned about the measures from which data was collected, analyzed, and interpreted. When it comes to the lexical features, this move can be varied with a wide range of forms such as *This author has adopted ...; ... by conducting...; Building on...; ... from the perspective of...; ... by means of...; from the legal perspective by reviewing...; Observations are also made from the political and cultural perspectives as well...; ... will be examined from three aspects ...; By examining different notions of reflection.....; Using a case study from South Australia ...; Using these evidential methods ... ; Using a sociodemographic approach...; Building on work by Estlund, Moriarty, Caulfield, and others ...; Relevant lessons from the South Australian experience are then extrapolated for consideration by other Australian jurisdictions...; This paper begins with an examination of the types of cases and provides examples of them; After coming to some tentative conclusions about such effectiveness ...; With reference to the Australian example...; Based on a survey of international strategies ...; To accomplish this, I draw on...; Drawing on qualitative data, we have applied Bourdieu's tools to understand undergraduate and practical legal training students' responses to notions of career accomplishment...; In this article, drawing on case studies from the United Kingdom and Australia ...*

However, significantly, in law research articles' abstracts, the method move is considered the optional move. This can be proved with just 20 abstracts having the method move and thus accounting for just below the half at about 40% in the total. The result is inconsistent with the

previous studies by Pho (2009) and Al-Khasawneh (2017), which indicated that the method move is a compulsory one in the analyzed abstracts about applied linguistics due to its significant roles (Al-Khasawneh, 2017; Pho, 2009). This raises the question that whether the field of the study have the impact on the occurrence of the method move in the abstracts.

Admittedly, the research method plays such an extremely essential role in any academic research and the researches cannot be conducted without the reasonably suitable method. However, in the field of law, the method move seems not to be included in the abstracts. This doesn't mean that there is no research methodology in the law study. In fact, in the field of law, there are a variety of methodologies to explore legal issues comprehensively and rigorously. The most common approach is doctrinal research, which involves the systematic analysis of the current legislation with the aim at elucidating legal principles and rules. This method helps the researchers grasp the intricacies of legal doctrines and their applications in practice. In addition, the empirical research is considered a research methodology in law, which is based on analyzing data through surveys, interviews, or observations in order to understand legal phenomena within their social context. Additionally, comparative research is considered one research method is conducted by examining legal systems, rules, and institutions across different jurisdictions. Besides, the law research authors also utilize historical research in order to provides valuable insights into the evolution of legal norms, institutions, and practices over time. Moreover, there are other methodologies such as interdisciplinary approaches, theoretical analysis, and policy-oriented research (Cahillane & Schweppe, 2016; Cane & Kritzer, 2012; Leeuw & Schmeets, 2016; McConville, 2017; Örüçü & Nelken, 2007).

This result is inconsistent sharply with studies by Pho (2009) and Al-Khasawneh (2017), which found the method move to be compulsory in applied linguistics abstracts. This discrepancy suggests that law abstracts prioritize legislative analysis over detailed methodological descriptions, reflecting disciplinary conventions that differ from those in social sciences and applied linguistics (Al-Khasawneh, 2017; Pho, 2009).

Through the thorough examination, it can be seen that when the authors applied the most popular research methodology – the systematic analysis of the current legislation, the method move are much likely to be mentioned in the law research article abstracts. This is understood by the community of law researchers that if the research methods are not included in the abstracts, this means that the authors apply the systematic analysis of the current legislation. That is the reason why unlike other abstracts in other areas, abstracts about law have a modest percentage of method move.

The move of product

The product move is the one that help the authors describe the key finding of the research. Furthermore, it also beneficial for the authors summarize the key results, arguments, or insights that their papers contribute to the field of law. More importantly, this section also highlights the important implications or recommendations in such specific field of law in order to deal with the issues raised in the introductory section. That is the reason why the product move made up the relatively large proportion in the investigated data. The lexical structures employed in the examined data may include *The research has found that; It is well settled that; The paper finds*

that; We show that; I argue that; This article speculates on...; This paper demonstrates that; The author argues that ...

Table 3 shows that there are 37 abstracts having the product move, accounting for 74% of the total abstracts. By far and large, the result coincides with the previous studies by Van Bonn & Swales (2007), Candarh (2012), Marefat & Mohammadzadeh (2013), and Al-Khasawneh (2017). These studies indicated that product move is compulsory in all the survey abstracts (Al-Khasawneh, 2017; Candarh, 2012; Marefat & Mohammadzadeh, 2013; Van Bonn & Swales, 2007). However, in this research, this figure just account for about 74% in the total abstracts, ranking the third one in five moves. Therefore, product move is considered the compulsory one in this paper. This slight variation suggests that while the product move is crucial across disciplines, law abstracts may prioritize other moves slightly more, reflecting their focus on legislative implications and contextual background.

The move of conclusion

The conclusion move is believed to be helpful for the authors summarize the main points in their researches and make suggestions. Therefore, the conclusion move is often realized through lexical structures to conclude the research including *The paper concludes that; It concludes that; In conclusion, the paper draws attention to...; Thus, ...; The article reasons that ...* and the ones to give recommendations such as *The relevant domestic laws should be...; States need to ...; There should be efforts to...; It suggests that; could be an important alternative for....; The authors recommend...; These reforms need to be undertaken...*

As for the significance, through the investigation of the data, it can be seen that the authors may make use of the conclusion move not only to sum up the key features but also focus on the importance of the findings and give recommendation for the modification of the current legislation. Some abstracts also mentioned the limitation of the study as well as make some suggestions for other research in the same field.

The result of the study showed that the conclusion move made up approximately 68% of the examined abstract with 34 abstracts having this move, so it can be considered to be the compulsory move in the law research articles' abstract. This figure indicates a little difference in comparison with the previous studies. Specifically, the study by Al-Khasawneh (2017) stated that the conclusion move accounted for 90% of the survey abstracts written by native English speakers (Al-Khasawneh, 2017). Additionally, the study by Li (2011) showed that all investigated abstracts had the conclusion section (Li, 2011). This can be explained that while the conclusion move is important in both contexts, the law research authors tend to pay attention to the objectives in the purpose move as well as the current issues in the introductory section in their abstracts.

The most frequent linear move patterns

The linear move patterns in the surveyed data is extremely various. However, this paper just conducted survey on five most frequent linear move patterns. The results can be illustrated in table 4 below:

Table 4.

Five Most Frequent Linear Move Patterns

No	Organization pattern	Frequency	Percentage
1	I-P-M-Pr-C	7	14%
2	I-P-C	7	14%
3	I-P-Pr-C	6	12%
4	I-M-P-Pr-C	4	8%
5	I-Pr-C	4	8%

Note: P = purpose; M = method; Pr = product; C = conclusion; I = introduction.

Table 4 illustrates frequency and percentage of different organization patterns employed in the investigated data. It can be clearly seen from the table is that "I-P-M-Pr-C" and "I-P-C" are two most frequently observed patterns with the frequency of 7 times and accounting for 14% of the total respectively. These patterns indicate a comprehensive approach, with the former including a detailed method and proposal before concluding, while the latter skips the method and proposal stages, moving directly from problem to conclusion.

The "I-P-Pr-C" pattern, which includes an introduction, problem, proposal, and conclusion, is the next most common, occurring six times and therefore accounting for 12% of the total. With this pattern, the research authors are more likely to pay more attention to present a solution directly after stating the problem, without detailing the methods used. The "I-M-P-Pr-C", which includes all elements, occurs four times, making up 8% of the instances. This pattern suggests a thorough approach where the method is explicitly discussed. Similarly, the "I-Pr-C" pattern, which happens four times and represents 8% of the total, demonstrates a straightforward approach by jumping from the introduction directly to the proposal and conclusion, bypassing detailed problem discussion and methods.

In conclusion, the table highlights that while comprehensive patterns involving all moves are common, there is also a significant use of more streamlined approaches that skip certain moves, reflecting diverse strategies in organizing law research abstracts.

Application in legal writing teaching

The findings of study are hoped to bring some benefits in legal writing education. First of all, the common rhetorical moves employed in LRA abstracts should be taught so that the students can familiarize with these rhetorical strategies and have a deep understanding of the expectations and conventions in legal academic writing. This knowledge is crucial for students aiming to publish their work in international law journals. In addition, the rhetorical strategies for building each move in the LRA abstracts should be taught so that the instructors can address specific needs. Specifically, if students struggle with the drafting of introduction move, instructors can provide more focused guidance and examples on how to effectively present

current social situations and the limitations of the contemporary legislation.

Secondly, the abstracts in the reputable international law journals can be used as authentic materials in legal writing classes. Based on these materials, students should be given chances to be accustomed to the rhetorical moves in the LRA abstracts. Specifically, the students should be given the targeted exercises and practical examples that require students to identify and replicate the rhetorical moves and then craft their own abstracts more effectively.

Thirdly, it is really necessary for the students to learn specific lexical features and discourse markers associated with each move in LRA abstracts. Additionally, the students should be taught to critically evaluate existing abstracts, identify the rhetorical moves and assess their effectiveness. When grasping the appropriate language and phrases used in legal abstracts, the students can apply them to write more clearly and persuasively. In terms of this aspect, the template for writing an abstract about law research should be introduced so that the students can easily apply it in their practical writing. From the analysis of the structures of the law research articles, a template can be built for the construction of an abstract as follow:

(Introduction) *This research paper examines/ [briefly introduce the topic of your research paper] with a focus on [mention any specific aspects or issues]. (Purpose) This research / This article / This paper identifies / examines / attempts / dissects / responds to / embraces / reviews /addresses / explains /summarizes / analyses/ criticizes/ aims to / exemplifies / proposes / provides / discuss / outlines / seeks / considers / [state the purpose or objective of your research paper], in order to [explain the significance of the topic and what you aim to achieve with your study]. (Method) The research methodology employed in this study involves [describe the research methods and approaches used], including [mention any specific methods or techniques]. Data was collected through [explain how data was collected] and analyzed using [briefly mention data analysis techniques]. (Product) The research has found that; It is well settled that; The paper finds that; We show that; I argue that; This article speculates on ...; This paper demonstrates that; The author argues that ... [summarize the key results or insights of your study], which contribute to [highlight the significance of your findings]. [Discuss any important implications or recommendations arising from your study]. (Conclusion) The paper concludes that; It concludes that; In conclusion, the paper draws attention to...; Thus, ...; The article reasons that ..., this research paper underscores the importance of [restate the main points discussed in your paper]. The relevant domestic laws should be...; States need to ...; There should be efforts to...; It suggests that; could be an important alternative for....; The authors recommend...; These reforms need to be undertaken....*

Finally, the contrastive analysis of abstracts from different fields of law and different cultural contexts should be conducted so that the students can have a deep understanding of how legal writing conventions vary across disciplines and cultures, preparing them for submitting to any law international journals that they wish. In other words, by aligning their writing with the identified rhetorical moves and conventions, students can meet the expectations of reviewers and editors in the specific law journals, thereby enhancing their academic and professional prospects.

To sum up, the genre analysis of LRA abstracts provides valuable insights of rhetorical

strategies that can be helpful for the improvement of the legal writing instruction. When the students are taught about these rhetorical strategies, the lexical features as well as discourse markers, they can be equipped with the skills needed to excel in academic legal writing and to publish their papers on the international journals the field of law.

Limitation and further research suggestions

The study has provided valuable insights into the rhetorical structures of law research article (LRA) abstracts, but it still several limitations. In terms of the corpus, the study has just surveyed 50 LRA abstracts from two specific law journals, which may have their own editorial standards and preferences that influence the rhetorical structures of the abstracts. Therefore, the study may not provide comprehensive and generalizable findings. In addition, the selected corpus is all in English, so the findings of different rhetorical conventions and structures has not reflected the cultural and linguistic variations. Thus, in the future, comparative studies should be conducted with more diverse range of articles as well as journals and publishers in order to provide a more global perspective on LRA abstracts. Moreover, there are some analyzed abstracts written by non-native English authors, so it may have influence on the employed rhetorical strategies. Besides, the corpus has been selected randomly from the open-access journals so this can limit the generalizability of the findings to all law research abstracts. In the future, research can address these limitations so that a more comprehensive insight of the rhetorical structures in law research article abstracts will be conducted.

Therefore, further research could explore the rhetorical structures and linguistic features of abstracts in other disciplines such as natural sciences, social sciences.... Then contrastive analysis can be conducted in order to identify discipline-specific conventions as well as academic writing patterns. In addition, exploration of LRA abstracts written in different languages could be conducted in order to evaluate the influence of cultural and linguistic factors on the rhetorical structure. More importantly, future research could extend genre analysis to other sections of legal research articles, such as introductions, literature reviews, results, discussions or conclusions. This could help to provide insights into the entire genre and its variations. In terms of education, further studies could investigate the effectiveness of teaching different rhetorical strategies to law students as for improving writing skills and publication success. Finally, further research could focus on employing digital tools and automated analysis techniques in order to analyze rhetorical structures in law academic articles. This will be useful to provide a more efficient and objective method for genre analysis and explore the potential of AI-driven writing assistants in improving legal writing.

Discussion

On the one hand, the results of this study indicate specific rhetorical moves that are prevalent in LRA abstracts with the popularity of the Purpose and Introduction moves. The findings of the study are quite consistent with Hyland's (2000) framework, which focuses on the role of clearly stated research objectives as well as contextualization of the research. Additionally, the results of the study are also consistent with other studies related to the high prevalence of the Purpose move with the aim at emphasizing the need for clarity and direction in legal writing

(Van Bonn & Swales, 2007; Al-Khasawneh, 2017).

On the other hand, the study shows the differences regarding other moves, specifically the Method move, which just accounts for only 40% of the analysed abstract. This is inconsistent with the results in studies about applied linguistics, where the Method move is more common (Pho, 2009; Santos, 1996). This may be due to the fact that the law scholars tend to focus on legislative analysis and theoretical discussion rather than detailed methodological descriptions (Candarh, 2012).

In addition, the study also analyses the role of Product and Conclusion moves, which were present in 74% and 68% of abstracts, respectively. This contributes to the linguistic characteristics of legal genre. In LRAs, Product and Conclusion moves have been playing such an important role in summarizing key findings and extending research implications, which is quite similar to previous studies of research article abstracts across disciplines (Lorés, 2004).

The study provides a unique contribution by focusing specifically on LRA abstracts, a genre that has been underexplored in genre analysis literature. The study hopes to offer new insights into the specific strategies employed by legal scholars to engage readers and communicate their research effectively.

Conclusion

This study has conducted a comprehensive genre analysis of law research article (LRA) abstracts, examining their rhetorical moves and linguistic features using Hyland's (2000) framework. The study showed that the purpose move accounted for the highest figure with 96% of the abstracts. This indicates the critical role in clearly stating the objectives of the research. After the purpose move, the introduction move is the most second prevalent with 92% of the abstracts. This illustrates the significance of establishing the research context. The product move and the conclusion move made up 74% and 68% of the abstracts respectively. This highlights the role of summarizing key findings and making the suggestions in the field of law. Surprisingly, unlike the previous studies, the method move just appeared in only 40% of the abstracts, which demonstrates the optional nature in this genre.

Despite some limitations associated with the limited corpus size, the focus on English-language abstracts, the findings are considered to be necessary for legal scholars to adhere to certain rhetorical conventions to meet the expectations of the academic community and enhance the clarity and impact of their scholarly writing. For legal writing instructors, the results of the study may provide valuable guidance for developing targeted teaching strategies. Future research should address these limitations by expanding the corpus and incorporating abstracts from diverse linguistic and cultural backgrounds.

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Biodata

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Decoding Scholarcy website: A Study on its Research Summarization Efficiency

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ABSTRACT

Keywords:

AI-powered
summarization,
academic literature,
research efficiency,
Scholarcy

The development of artificial intelligence (AI) has revolutionized various facets of education, particularly the research domain. With the rapid growth of scholarly literature, the need for an efficient tool for summarization has become increasingly paramount. This study proposes a quantitative investigation into the efficiency of Scholarcy (www.scholarcy.com), an AI-powered summarizer used to aid researchers in summarizing academic literature. Thirty-five postgraduate students were involved in a survey research design. After five weeks of using Scholarcy, participants were asked to complete a survey questionnaire via their email addresses to give feedback on this tool. The results indicated a positive reception when postgraduates found this AI summarizer convenient and useful for reading academic papers. On the other hand, the participants identified several drawbacks when using it including concerns about summary quality, the absence of a mobile application, and high cost, along with suggestions for further application. With the highlights of both benefits and limitations, the study hopes to contribute valuable insights into the development of AI-powered summarization tools in the future.

Introduction

In the era of information and technology development, the term “Information and Communication Technology” (ICT) has become widely known. Thanks to it, there have been huge changes in people’s life. It has a major impact on every field in society including business, healthcare, and education. Quickly, ICT has been used in schools to improve students’ learning experiences and facilitate teachers’ teaching. Thanks to the advancement of technology, students are more engaging in learning activities and teachers have useful tools to design lessons, organize interesting in-class activities, diversify teaching materials, and manage classes.

Specifically, there are a variety of benefits when using ICT in classrooms (Henderson, 2020). Being integrated into lessons, technology helps students more interested in the content they are

studying because of interactive tasks, games, videos, or vivid sounds, then students can actively participate in the activities with joyfulness. Moreover, with online videos in the Learning Management System of schools, students can enhance their self-study at their own pace when they can easily review the knowledge that they are not sure about. Regarding benefits for teachers, they can make use of different apps or online resources to create attractive activities for students, score automatically, and use online assessments and students' progress management, which helps teachers have effective lessons and save time (Henderson, 2020).

Besides using ICT tools which are beneficial for teaching and learning activities in class, teachers or educational researchers need to read many articles to have a deep understanding of their field. They have to spend a huge amount of time studying research articles. Therefore, it is essential to have some intelligent tools that can summarize the articles quickly and help teachers or researchers save time in reading. Among those tools, Scholarcy, which is AI-powered, is an extremely useful tool for article summarization with various merits. This study aims to examine the benefits and drawbacks of using Scholarcy as a summarizing tool for teachers or education researchers and hopes to bring new useful information for the readers, especially those who are concerned about it.

Literature review

ICT is an abbreviation for Information and Communication Technology. This is a broad term for Information Technology (IT), which includes the Internet, wireless networks, mobile phones, computers, software, middleware, video conferencing, social networks, and other media applications and services that allow users to access, retrieve, store, transmit and edit information in a digital form. ICT has increasingly been used widely in every aspect of society, especially education. ICT is seen as an influential tool for reforming and changing education.

Adequate use of ICT can improve educational quality and link learning to real-world circumstances, according to several prior research (Lowther et al. 2008; Weert and Tatnall 2005). According to Weert and Tatnall (2005), learning is a continuous, lifelong process in which students deviate from conventional methods and alter their expectations by pursuing information. They will need to be prepared for and open to exploring new information sources as time goes on. For these students, having ICT skills would be a crucial necessity.

Jo Shan Fu (2013) indicated that using ICT in education has various benefits including assisting students in accessing digital information efficiently and effectively, supporting student-centered and self-directed learning, producing a creative learning environment, promoting collaborative learning in a distance-learning environment, offering more opportunities to develop critical thinking skills, improving teaching and learning quality, supporting teaching by facilitating access to course content. According to Bindu (2016), ICT plays a pivotal role in enhancing teaching and learning, accessibility to learning, learning environment and motivation, and academic performance.

Nearly five decades ago, science acquired a tool that could facilitate research and then started to change the way people do research. The earlier technologies were replaced by electronic digital computers. Arithmetic calculations, which were previously done with paper and pencil,

slide rules, abacuses, and mechanical calculators, were completed by researchers with computers. They offered many benefits. Larger computations could be completed more quickly, more reliably, and possibly more affordable. Unlike the large, expensive, and difficult-to-use computers in the past, nowadays, every scientist may have access to considerable computing capacity with a few thousand-dollar personal computers on their desks. Thanks to information technology, the limitations of speed, cost, and distance have been greatly reduced for researchers. It has led to improvements in research. Researchers can work on a larger volume of databases. Knowledge-gathering becomes easier, resource development is enhanced, and researchers can collaborate more widely and effectively (National Academy Press, 1989). *Information Technology and the Conduct of Research: The User's View*. National Academy Press).

Regarding the development of AI in education, various studies underscore the paramount importance of AI in providing learners with diverse learning experience. For example, AI applications can create meaningful conversations (Lu, 2018) and enhance students' speaking performance as well as reading comprehension (El Shazly, 2020; Yin et al., 2021). Moreover, AI tools enable teachers to enhance the motivation and engagement of students in learning activities related to EFL classes (Bailey et al., 2021). In addition, it is demonstrated that AI-driven tools grade student assignments on speech and writing with immediate and multidimensional feedback (Bailin, 1987; Holland et al., 1993; Nagata, 1996). By and large, the application of AI will need to be widely encouraged for education in general and higher education in the near future due to AI's benefits (Phan, 2023).

Besides class settings, AI tools become advantageous in summarization for researchers. Adwood (2023) pointed out that the increase in academic research articles offers both opportunities and challenges for researchers. While the wealth of information encourages creativity and the sharing of knowledge, it also makes it difficult to keep up with the most recent research results. To deal with that, researchers have begun to use artificial intelligence (AI) tools to summarize academic research articles for easier and faster reading comprehension, which saves researchers from having to look through unimportant information and helps them quickly grasp the main ideas.

Scholarcy is an AI-powered article summarizer, a tool that uses artificial intelligence and machine learning technologies to automatically generate content of scientific publications in the form of easy-to-understand summaries (Renn, 2021). Scholarcy enables academic researchers to keep up-to-date with the growing volume of research papers and assess, understand, and read papers faster. Besides, it can also help journalists to grasp scientific publications more quickly and to assess their relevance. This summarizer can also be used to automatically generate journalistic summaries on specific topics.

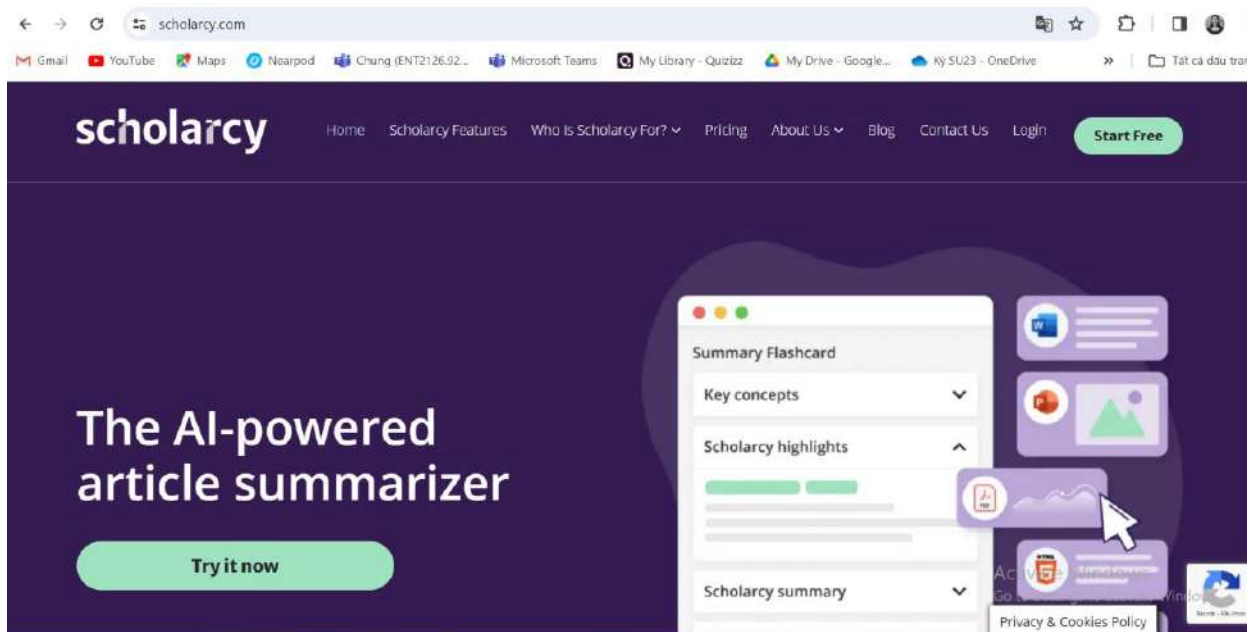


Figure 1. Scholarcy interface

Using Scholarcy to summarize articles, readers need to follow some basic steps. First, the readers join the link Scholarcy.com as they can see the interface (Figure 1). Second, they Click on “Start Free”, they can see the request to sign up by creating an account or signing up with a Google account. Next, the readers choose the function “Article Summarizer” and simply drop their documents or links into Scholarcy, then it will condense them in seconds, pulling out key information. Then, the readers can see the main concepts in the paper and a bullet point list of key findings to accelerate people’s reading (Figure 2). If the readers never search for cited sources, Scholarcy generates direct links to these for them. In summary, it can be seen that Scholarcy is a virtual research assistant, breaking articles into bite-sized chunks to give readers the key facts faster.

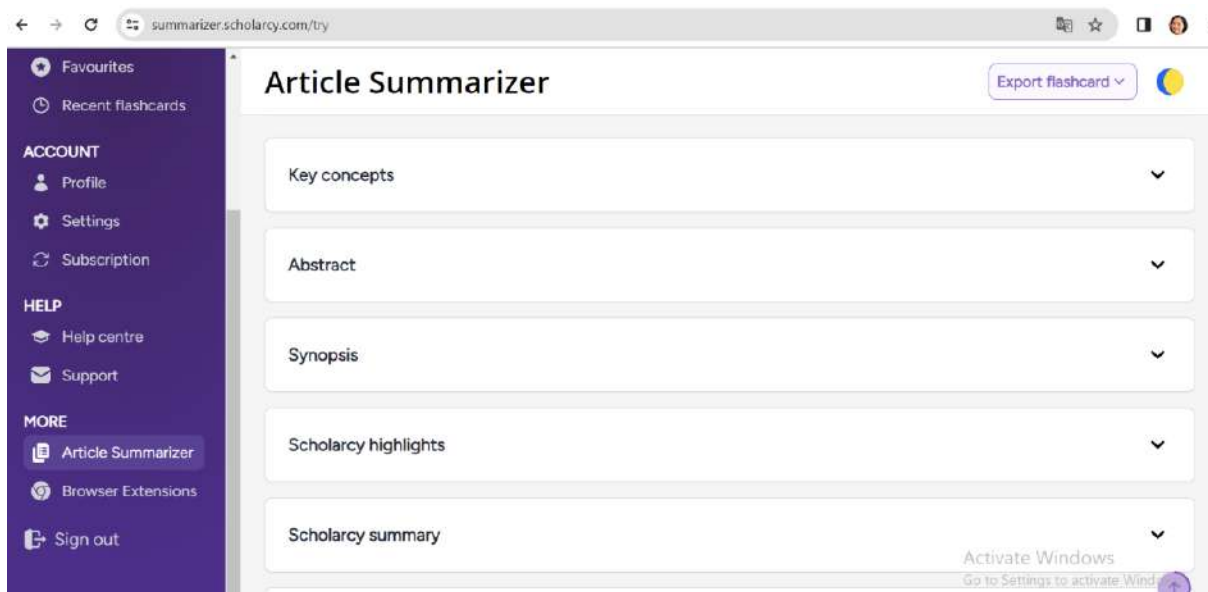


Figure 2. A bullet point list of main information

Research Questions

To achieve the objectives of this research, the following questions will be addressed:

1. How effective is Scholarcy in improving research summarization for postgraduate students?
2. What limitations do postgraduate students identify in using Scholarcy?

Methods

Pedagogical Setting & Participants

The study was conducted in a postgraduate class of thirty-five students at the University of Languages and International Studies in Hanoi, all of whom participated in this research. Among them, there were 33.3% of teachers who worked at secondary school, followed by 27.8% of primary school teachers. The number of college and university lecturers accounted for 25%, and the lowest proportion was for high school teachers with 13.9%. They were learning a Master of Science in Teaching English as a Foreign Language with about nine different subjects which required them to read a variety of research papers to develop their knowledge and complete relevant assignments.

Design of the Study

The survey research design was chosen to conduct the study because it enabled us to collect subjective feedback from participants in a time-saving way. All thirty-five participants were studying in a class which was also our class; therefore, we could gather the data conveniently. We started using Scholarcy at the beginning of the subject “Information and Communication Technology in English Language Teaching” in which we had opportunities to explore numerous tools and applications facilitating teaching. After five weeks of the subjects, we sent the survey to our classmates to get feedback from them.

Data collection & analysis

In the first lesson on Information and Communication Technology in ELT, we introduced Scholarcy to our classmates. During five weeks of using Scholarcy for different subjects, students were required to use it at least once a week to read articles and do assignments. If they had any difficulties, they contacted us for further instructions. After that period of time, we sent them an email including a survey questionnaire created in Google Forms to get their feedback and comments. The questionnaire comprised nine questions with five Likert scale questions and four open-ended questions which covered aspects of users’ satisfaction related to its interface, fee, as well as application, problems, and recommendations.

After collecting the data from the Google Form and having a Google Excel file, we classified and systematized the information in tables and charts to analyze and present accordingly, so the method of analysis was descriptive statistics.

Results/Findings and Discussion

Table 1.

Users' feedback on Scholarcy features and usability

Questions		Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
1	The interface of the website is friendly.	0	0	2.8	69.4	27.8
2	Scholarcy is a helpful summarizing tool, I will surely try it when I have to read long papers.	0	2.8	16.7	47.2	33.3
3	I am satisfied with the FREE version which provides basic functions and adequately fulfills my needs.	2.8	16.7	30.6	38.9	11.1
4	As a teacher, I see many of its applications in teaching.	2.8	11.1	36.1	36.1	13.9
5	The user's fee is reasonable.	11.1	30.6	33.3	16.7	8.3

It can be seen from Table 1 that it showed positive aspects when Scholarcy was utilized by thirty-five users. Firstly, the interface of the Scholarcy is simple and easy to use. According to the result, 69.4% of users agreed that the interface was friendly, and 27.8% of users strongly agreed with that. Secondly, the majority of respondents supported that Scholarcy was a helpful summarizing tool, so they would surely try it when they read long papers. Moreover, about 50% of users agreed that they were satisfied with the free version, which provided basic functions adequately fulfilling their needs. Similarly, 50% reported that they saw many of its applications in teaching. However, only 25% said that the user's fee was reasonable. By and large, except for the cost, factors including interface, summarizing function and its application for teaching show several advantages of this tool.

Table 2.

The most favorite features of Scholarcy

Features		Percentage
1	Quick summarizing function	62.9%
2	Ease of use	17.1%
3	User-friendly interface	14.3%
4	Others	5.7%

Regarding the features that users are interested in the most in Table 2, 62.9% said that it was the quick summarizing function since it helped them save time when reading research articles. In fact, the long and complex research will be summarized into bullet points including key concepts, abstracts, synopsis, Scholarcy highlights, and Scholarcy summary. By reading these points, it becomes easier for readers to digest the article without consuming a lot of time. Thanks to its fast summarization and highlights, researchers can make decisions on whether the text

was useful or not quickly and precisely. Moreover, people can try using it without registration, which is convenient for users.

Table 3.

Problems that users may encounter while using Scholarcy.

Problems		Percentage
1	Copy-paste quality of summarization	28.6%
2	Limited free uses per day	22.9%
3	High fee	17.1%
4	Plagiarism	5.7%
5	No problems	25.7%

On the other hand, Table 3 shows that users found some drawbacks when using Scholarcy. 28.6% of participants were concerned about the copy-paste quality of summarization. The summary is done by AI, so the quality of the summary is not always good enough. The abstract in Figure 3 is taken as an example. The figure shows that it is just the copy-paste version of the abstract shown in the research paper. The only difference is that it highlights the key phrases and provides web links for key terms. Hence, it is much better if Scholarcy can summarize intelligently instead of providing the same text with highlights only. In addition, Scholarcy allows free users to summarize three times a day, which is relatively limited. As a result, 22.9% of respondents cared about this aspect. Besides, the users need to pay 150,000 VND per month or 1,350,000 VND per year to use all functions of Scholarcy including the library, sharing with others, and deleting summaries, which hinders people from using it more frequently and widely.

The screenshot shows a web browser window with the URL summarizer.scholarcy.com/try. The page title is "Article Summarizer" and it features a sidebar with navigation options like "Recent flashcards", "ACCOUNT", "HELP", and "MORE". The main content area displays an "Abstract" summary of an article. The text is highlighted in yellow, indicating key phrases. The abstract discusses the application of artificial intelligence in education, specifically focusing on improving English pronunciation among vocational students using an AI chatbot named Mission Fluent. The summary highlights that the experimental group showed better English pronunciation than the control group, and that the study focuses on the significance of incorporating innovative technologies into language learning programs.

Figure 3. Example of Abstract Summary

Table 4.

Recommendations for Scholarcy.

Features		Percentage
1	More free uses per day	54.3%
2	Improving the quality of summarization	15.7 %
3	Note-taking section	5.7 %
4	Saving articles online	5.7 %
5	The mobile application	5.8 %
6	Nothing	12.8 %

When it comes to some features or changes that users would like to add to Scholarcy as shown in Table 4, the majority of participants (54.3%) in the survey offered to have more free uses per day, followed by 15.7% who expected the tool to improve the quality of summarization. Other recommendations, such as space for note taking and saving articles online for later use or the need for the mobile application on a smartphone also make a small proportion.

The finding revealed that most users (54.3%) would like to recommend Scholarcy to their colleagues and 42.9% may do it in the future (Figure 03).

9. Would you like to recommend it to your colleagues?

35 câu trả lời

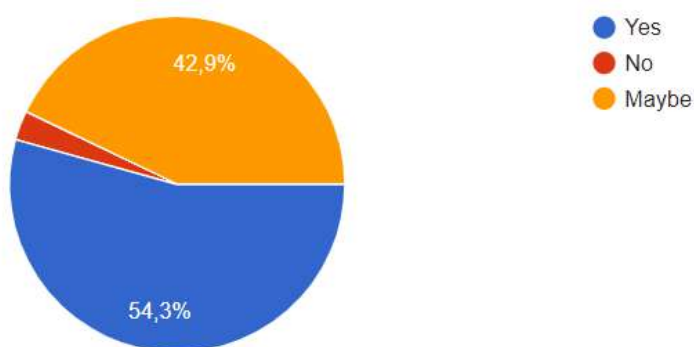


Figure 3. Possibility of recommending Scholarcy to others

Most previous articles talk about the benefits of Scholarcy that are content with the above-mentioned points. The technology helps researchers assess, understand, and read papers faster (Renn, 2021). It is also stated by Renn (2021) that it could help journalists grasp scientific publications more quickly, and people could try it without registration. However, there is almost nothing about disadvantages of Scholarcy in previous studies. Atwood (2023) mentioned that Scholarcy was an extractive summarization system that identifies and extracts key sentences or

passages from the original document to create a short, coherent, summary that preserves the original wording. However, it did not state that it is a disadvantage.

Therefore, in comparison with previous articles about Scholarcy, this study is more detailed and helps people have a bigger picture of the benefits and drawbacks of Scholarcy.

Conclusion

Overall, the study hopes to provide insights into the benefits and disadvantages of using Scholarcy as an AI-driven summarization tool. On the one hand, the majority of participants aligned with the friendly interface and usefulness of summarizing research papers. Additionally, half of respondents expressed satisfaction with the free version and its potential for use in educational settings. Notably, the most favored function was the quick summarizing function which enabled people to save time when reading research articles, particularly the long ones. Meanwhile, the key drawbacks were associated with the quality of summarization, limited free uses per day, and the relatively high cost of premium features.

It is undeniable that there are several limitations in our studies, including a small sample size and short duration. The study was conducted on thirty-five postgraduates in one class from a single university, which may not fully represent the broader population of Scholarcy users. Moreover, the research solely evaluated the short-term effectiveness of the tool because the participants used it in only five weeks; therefore, we need a longer period of time to examine the long-term usefulness. Therefore, it is advisable to involve a larger group of participants and let them use Scholarcy over a longer period of time so that we can gain a more thorough understanding of effectiveness and potential limitations.

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Using Grammarly in Enhancing Students' Grammatical Accuracy in English Writing: A Case at a Private College in Hanoi

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ABSTRACT

Keywords: Automated Writing Evaluation, Grammarly, writing skills, grammatical accuracy

Writing is regarded as a hard-to-learn skill in English, and achieving grammatical accuracy in writing is considered challenging for most English learners. As technologies advance, Automated Writing Evaluation (AWE) tools have increasingly been implemented in English language education to enhance learning outcomes. As an AWE assistant, Grammarly has been found beneficial in improving English learners' writing skills. This study aimed to investigate the effectiveness of using Grammarly in enhancing learners' grammatical accuracy in writing. The study utilized a case study design with qualitative and quantitative data collected from thirty-two second-year college students. Learners' writing assignments were analyzed using surface structure taxonomy followed by a survey questionnaire to get quantitative data for the research. Qualitative data was provided through a focus-group interview. The findings revealed a reduction in learners' grammatical errors after Grammarly intervention and their positive attitude toward using Grammarly to improve their English writing. Afterward, there were several recommendations for teachers to foster their students' English writing skills.

Introduction

Writing is undeniably an essential skill in English learning. According to Sharma (2004, as cited in Fitria, 2021), writing is one of the productive skills for learners to achieve in order to ensure communicative competence. However, writing is seemingly challenging and demanding for most English learners. Brown (2001) states that writing requires a process of thinking, drafting, and revising with specialized skills. Similarly, Faller (2018) and Maharani (2018) indicate that it is a difficult task involving cognitive and linguistic abilities.

Empirical studies have pointed out a new trend of using Automated Writing Evaluation (hereafter referred to as AWE) software has emerged in English language teaching and learning. More importantly, the application of AWE tools has been found to be effective in enhancing learners' writing skills. Bailey and Lee (2020) indicate that the development of AWE tools has

enabled language learners to receive feedback in terms of language, content, and automated scores. Furthermore, O'Neil and Russell's (2019) research emphasized that Grammarly was a supporting tool that gave learners grammatical feedback in their writing. Similarly, Fitria (2021) points out that Grammarly could foster students' writing performance.

As the current literature has indicated, undergraduate students encounter numerous challenges in writing skills ranging from micro to macro dimensions (Faisal & Carabella, 2023). The former dimension refers to linguistic features known as grammar, vocabulary, and sentence construction while the latter is associated with content, idea generation and development, organization, and coherence (Yan, 2016). Noticeably, the students at the researcher's institution frequently make mistakes at the micro level in their writing. To illustrate, they keep using the base form of the verb as in "*He go to school.*" or often misuse the verb *tobe* as in "*I'm come from Hanoi.*". In addition, some students struggle with selecting an appropriate word to denote a particular meaning. For example, in the sentence "*I think the worst thing about the job is the many things to do.*", the expression "*many things to do*" should be replaced by "*heavy workload*" to make it understandable. From the above-mentioned issue, there is a need for an AI-powered tool to assist learners in tackling their writing difficulties.

From the above, this research was conducted to investigate the effectiveness of using Grammarly in fostering students' grammatical accuracy in writing and their attitude toward the intervention in English classes.

Literature review

Writing

Peter and Singaravelu (2020, as cited in Phan, 2023) explain that writing is a tool for self-expression, communication, information interpretation, recording experiences, and effective learning. In Nunan's (2003, as cited in Tran, 2024) viewpoint, writing is defined as a mental process of inventing, articulating, and organizing ideas into statements, sentences, or paragraphs that are clear and understandable to readers.

Writing skills play a paramount role in English learning. Bello (1997, as cited in Nguyen & Huynh, 2023) demonstrates that writing skills can enhance language acquisition since practicing words, sentences, and paragraphs by writing can help English learners communicate ideas effectively and reinforce grammar and vocabulary knowledge. From Asmuti's (2002) viewpoint, language learners can formulate their ideas systematically and logically by mastering writing skills. Moreover, Al-Jumaily (2015) emphasizes that writing, among the four language skills, is the mirror that reflects an individual's language knowledge and ability; hence, language learners should work hard to master it.

From the above, writing can be understood as a method of conveying ideas or thoughts through a system of symbols or letters. Additionally, writing is considered an essential skill in language learning that requires language learners' efforts and hard work to achieve competence.

Automated Writing Evaluation (AWE) tools

AWE innovation has been a growing area in language teaching and learning. Dong (2023), in his research, mentions numerous AI-powered writing tools such as Grammarly, Turnitin, ProWritingAid, Qillbot, Hemingway Editor, WriteLab, Scribens, and AutoCrit. Studies have shown the merits of AWE tools implementation in English language classes for teachers and

learners. Feedback from AWE tools is beneficial for learners to modify their writing immediately, and it can help reduce teachers' workload in evaluating their students' writing (Chou et al., 2016). In addition, Brinkman et al. (2020, as cited in Dong, 2023) developed a writing tool that provided personalized feedback to learners of an introductory writing course. The report indicated the tool effectively assisted learners in improving their writing skills, and the learners positively perceived the intervention. Moreover, Liu et al. (2020) report that a writing tool developed with his colleagues was beneficial in upgrading their students' reasoning skills and was well-received by students.

Despite the potential of AWE application in English language classes, there are several concerns, one of which is learners' adaptation to AWE tools. Dong (2023) indicates that students are used to receiving feedback from human instructors, so they are likely to find it difficult to understand and apply the feedback from AI systems. Gao et al. (2021) claim that students tend to revise their writing work based on feedback from their teachers rather than from AWE tools. However, the authors also note that students are likely to change their writing when they receive feedback from a human instructor and an AI tool.

From the above, there is no doubt that AWE intervention offers merits to both teachers and students. However, the application of the AWE tools in education should be approached with ongoing efforts, support, and guidance from human instructors to maximize their effectiveness.

Grammarly

Harris et al. (2003) emphasize that writing is a communication tool that involves sub-skills such as spelling, punctuation, and grammar. Moreover, grammar is an undoubtedly important component of writing since grammatical accuracy helps ensure the writers' intended meaning and avoid misunderstanding in communication (Lush, 2002; Larsen-Freeman, 2003).

Grammarly is an AWE tool Lytvun and Alext Shevchenk created in 2009 (Pratama, 2020, as cited in Faisal & Carabella, 2023). Currently, Grammarly is available as an app that users can install on their computers or mobile phones and as a browser extension that can be accessed via <https://www.grammarly.com/>. Users can create a Grammarly account by using their Gmail address. Figure 1 illustrates the interface of Grammarly when users successfully sign in.

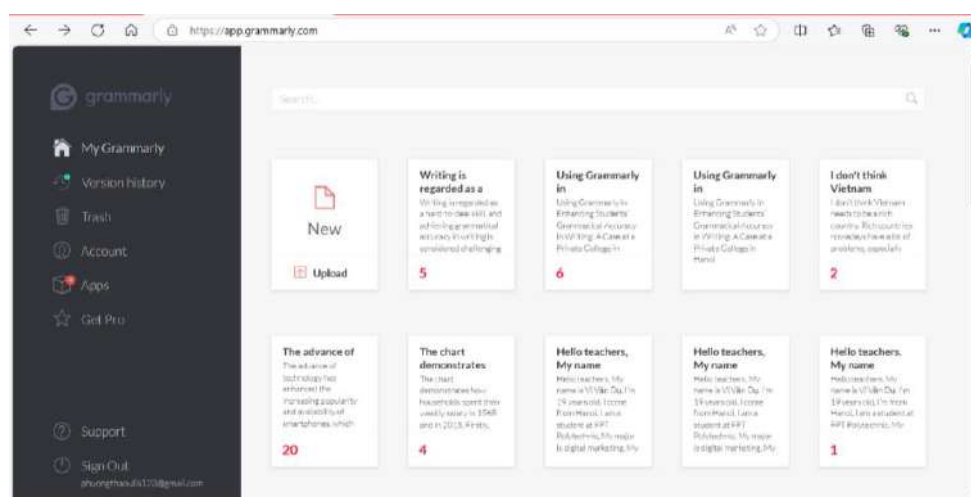


Figure 1. The interface of Grammarly

To have a writing work checked, users can either click the “New” option to type or paste their texts or upload their writing with the “Upload” function. Afterward, the system would scan, check, and provide corrections and suggestions on the parts that need improvement in the document. Noticeably, Grammarly can identify errors in six categories: (1) spelling, (2)

grammar, (3) punctuation, (4) sentence structure, (5) style, and (6) vocabulary enhancement (O'Neil & Russell, 2019).

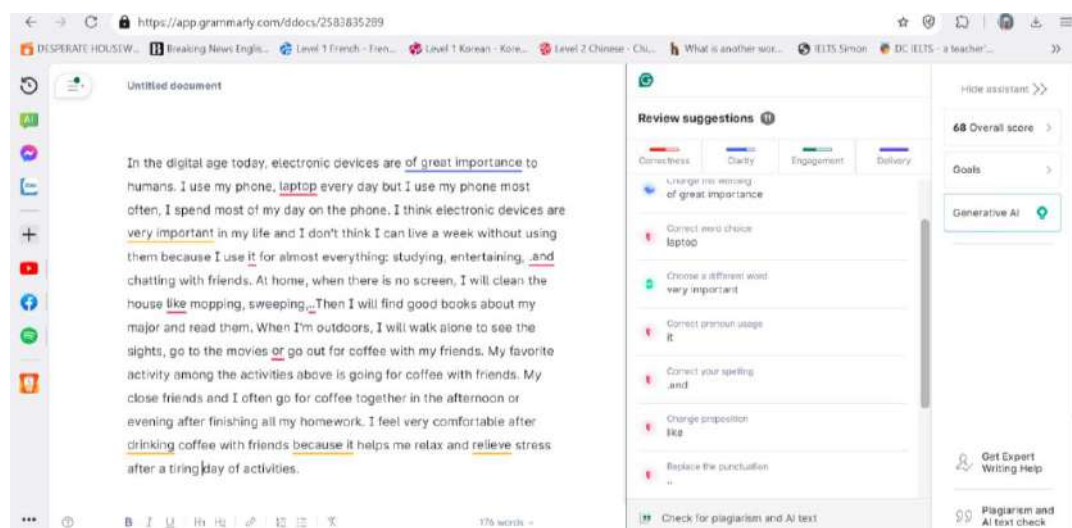


Figure 2. The interface of Grammarly as the evaluation of a writing work is in progress

Grammarly offers users two service options, free and premium. The free grammar check service provides access to a limited number of features focusing mainly on the three aspects known as spelling, grammar, and punctuation (Fitria, 2021). However, the premium service option, which charges users a certain amount of fee, offers access to all features and several advanced features in addition to the ones provided by the free checker version. In this research, Grammarly's free check service was chosen and suggested to the participants.

Grammarly has been reviewed as one of the most accurate online grammar checkers (O'Neil & Russell, 2019). The system can automatically analyze and correct a wide range of grammatical errors, which is beneficial for students struggling with English grammar rules and spelling (Nova, 2018; Ummah & Bisriyah, 2022). In the same line, Ghufroon (2019) highlights the positive contribution in reducing errors when using Grammarly software in EFL writing classes.

Surface strategy taxonomy

Dulay et al. (1982) classify grammatical errors into four categories including (1) linguistic category taxonomy, (2) surface strategy taxonomy, (3) comparative taxonomy, and (4) communicative taxonomy. Among these four categories, surface strategy taxonomy (also known as surface structure taxonomy) was selected as the fundament for this research. The taxonomy of the surface structure mainly focuses on how the mechanisms of linguistic organizations are altered (Maniam & Rajagopal, 2026). Moreover, Aziz et al. (2020) claim that analyzing errors based on the surface strategy taxonomy may offer us a glimpse of the student's cognitive process underlying their constructions of a target language system.

According to the surface structure taxonomy, grammatical errors are segmented into four categories including omission, addition, misformation, and misordering. The four categories are explained in detail in Table 1 hereafter.

Table 1.

Four types of errors in surface strategy taxonomy

Types	Explanations
Omission	<p>Omission occurs when a required linguistic item is omitted in the sentence (Maodilao & Hidayat, 2021). Utami and Mahardika (2023) indicate seven subtypes of omission such as prepositional omission, article omission, <i>tobe</i> omission, conjunction omission, marker omission, verb omission, and pronoun omission.</p> <p>Example: <i>“He wash the dishes.”</i> – is an example of pronoun omission. The marker <i>-s/-es</i> of the present verb for the third-person singular subject <i>he</i> was omitted in the sentence.</p>
Addition	<p>Addition errors refer to the presence of an element or form that must not appear in a well-formed utterance or sentence (Maodilao & Hidayat, 2021). There are three subtypes of addition known as regularization (the rules used for irregular cases are applied to those exceptions to the rules), double-making (a language feature is marked at two levels), and simple additions (errors that are neither regularizations nor double-makings).</p> <p>Examples: <i>“He sees three mouses running in the kitchen.”</i> – is an example of regularization since the marker <i>-s/-es</i> for plural nouns was wrongly applied to the word <i>mouse</i>, which is an exception to the rule (the correct form is <i>mice</i>). <i>“I didn’t wanted to be a member of this team.”</i> – illustrates a double making error. There is no need to use the past simple form of <i>“want”</i> after auxiliary <i>“didn’t”</i>. <i>“You should to see the doctor.”</i> – exemplifies a simple addition error as the addition of <i>“to”</i> is not necessary after <i>“should”</i>, a modal verb.</p>
Misformation	<p>Misformation errors refer to the use of the wrong form of a morpheme in an utterance (Maodilao & Hidayat, 2021). There are three types of misformation errors including regularization (a regular marker is used for an irregular one), archi-forms (the selection of a member of a class or forms to represent others in the class), and alternative forms (when the writer fails to construct proper forms).</p> <p>Examples: <i>“Last night, he readed a book before going to bed.”</i> – illustrates a regularization error when the <i>“-ed”</i> ending was added to the verb <i>read</i>, an irregular verb. <i>“That roses are so beautiful.”</i> – is an example of archi-form error as <i>“that”</i> was used instead of <i>“those”</i>. <i>“those”</i> is correct in this case. <i>“I swum after he had went home.”</i> – exemplifies an alternative form error because the writer constructed an inaccurate form of the past simple verb <i>“swim”</i>. It should be <i>“swam”</i>.</p>
Misordering	<p>Utami and Mahardika (2023) explain that misordering errors occur when a certain part is misplaced in a sentence.</p> <p>Example: <i>“He is dating a girl beautiful.”</i> – illustrates a misordering error since the adjective <i>“beautiful”</i> was misplaced. It must precede the noun <i>“girl”</i> according to the English rules.</p>

Perception

In psychology, the term perception has been defined by many scholars. In Solomon’s (2019) words, perception indicates how an individual makes meaning through the comprehension and interpretation of a stimulus. Sharing the same viewpoint, Otara (2011, as cited in Faisal & Carabella, 2023) explains that perception represents the human sensory experience of the world, which includes the awareness of the stimuli and an individual’s decisions on how to respond to

them. From the above, it can be inferred that perception, from the view of psychology, primarily focuses on a particular process that affects how a person perceives and responds to stimuli.

In the field of language teaching and learning, perception indicates personal desire and the process of acquiring knowledge of the surrounding world. Latif and Sahla (2018, as cited in Faisal & Carabella, 2023) state that perception is a sensitive process beginning with a desire to understand the surrounding world. Furthermore, Talis et al. (2018) highlight that perception involves a process in which individuals select, receive, organize, and interpret information from the outside world to make it meaningful to them. It is noticeable that the perception of the same senses may vary from human to human since each human's brain interprets a stimulus differently based on their memory, experience, emotions, or expectations (Lailika, 2019).

Robbins (2018) indicates three indicators of perception named acceptance, understanding, and evaluation. Firstly, acceptance concerns with how a person accepts information from visual, auditory, touch, taste, or sense. Secondly, understanding refers to how a person perceives information based on background knowledge. Finally, evaluation displays how one evaluates and assesses a stimulus associated with his or her existing knowledge and experience. This research utilized the theory proposed by Robbins (2018) to investigate students' perceptions toward the Grammarly intervention.

Previous studies

Numerous studies have been conducted to examine the impacts of Grammarly in enhancing students' writing skills. Maudilia and Wibowo's (2022) action study investigated the effectiveness of using Grammarly learning activities in improving the writing abilities of thirty-three students. The qualitative and quantitative findings confirmed an improvement in the participants' writing skills. Moreover, a case study by Huang et al. (2020) studied the effectiveness of using Grammarly in EFL writing during a 16-week experimental period in China. The participants were forty-three English-majored sophomores. The results of the pre-test, post-test, and questionnaire revealed a significant increase in students' writing performance through the 16-week intervention and their satisfaction with the tool. Furthermore, Sanosi (2022) conducted a between-group experimental study with sixty-four college students to investigate the impact of Grammarly on students' academic writing accuracy. The results indicated that after fourteen weeks of using Grammarly, the experimental group showed a significant improvement in writing accuracy compared to their counterparts. Dewi's (2022) research investigated EFL students' perceptions of the effectiveness of Grammarly. The study utilized a mixed method with qualitative and quantitative data from a questionnaire and interviews with seventy-five students in an EFL writing class. The findings showed that the students had positive perceptions of using Grammarly. The results also suggested that Grammarly had positive impacts on student's writing performance. Quantitative research by Faisal and Carabella (2023) examined the students' attitudes toward using Grammarly in their writing classes. Twenty-three fourth-semester students of the English Language Education Study Program at a private university in Central Java were engaged in the study. The results suggested that 73.3% of the students positively perceived using Grammarly in the academic writing process.

The above-mentioned studies have significantly contributed to identifying the positive effects of using Grammarly in enhancing students' writing performance. Noticeably, most of the studies separately investigated the students' perceptions of the Grammarly tool and the effectiveness of the tool in improving their writing performance. Nevertheless, there may be an interplay between students' attitudes toward Grammarly and the effectiveness of such an

intervention to enhance their writing skills. In addition, as indicated in the literature, Grammarly is regarded as a reliable and potential tool for grammar error reduction. However, not many studies took Grammarly into consideration as a tool to improve students' grammatical accuracy in writing. More importantly, at the researcher's college, most students are low-leveled in English, so enhancing their grammatical accuracy in writing can provide them with a foundation to achieve competence in the English language. Therefore, this research was conducted to study the effectiveness of using Grammarly in enhancing students' grammatical accuracy in writing and their perceptions toward the intervention.

Research Questions

The research aimed to investigate the effectiveness of using Grammarly in fostering students' grammatical accuracy in writing and their attitude toward the intervention in English classes. In other words, the study addressed the two following research questions:

1. How effectively can Grammarly assist students in reducing grammatical errors in writing?
2. What are students' perceptions of using Grammarly?

Methods

Pedagogical Setting & Participants

The study was conducted at a private college where students were required to take four courses in general English as a condition to graduate. The English program that students are enrolling in employs the blended learning method. The coursebook used for the students is American Language Hub, Level 1. Each course lasts six weeks containing seventy-five hours (thirty-four hours for offline lessons and forty-one hours for self-study). There are three two-hour lessons per week. Before class, students have to log in to an online learning system to self-study vocabulary and grammar knowledge and finish practice exercises. In class, the teachers hold activities to review what students learned at home and to help them practice the four skills of English.

Grammarly intervention was implemented with the second-year students in one English class during a six-week period. The students were non-English majors, and they were currently taking the third English course. Upon the course requirement, students were to complete two writing assignments in the second and fifth weeks. The two assignments account for 30% of the total score gained for the course. These assignments were assigned to be finished at home and submitted via the online learning system. In class, teachers gave students detailed instructions on the writing format, content, and how to use Grammarly to proofread their writing before submission. For each writing assignment, students were to write two versions. After finishing the first version, they must have it proofread by the Grammarly free service version to make possible changes and upgrade to version 2, which was marked by the teacher. The first writing assignment was assigned in week 1 and collected in week 2. Following the same process, the second one was assigned and collected in week 5 and week 6, respectively. Noticeably, students had to submit both versions for the teacher to ensure that they had their writing checked and improved with Grammarly. Additionally, students had to highlight the parts that they had made changes after revising the pre-checked version with Grammarly.

The participants were chosen based on a purposive sampling approach. Cohen et al. (2007) explain that purposive sampling is an approach in which the researchers handpick the cases to

be included in the sample based on their judgment of their typicality or possession of specific characteristics being sought. Despite the disadvantage of not representing a significant population, Cohen et al. (2007) emphasize that the purposive sampling technique was advantageous since it is easy and less expensive to set up. This technique was beneficial as the study did not primarily aim at generalizing the findings for a large population. Utilizing the above approach, students who used the Grammarly tool in both writing assignments were selected. Therefore, there were officially thirty-two students participating in the study though the targeted number was thirty-six. In the first place, the students' writing assignments throughout the course were collected for analysis. Afterward, at the end of the course, the students were invited to respond to a survey questionnaire. Then, ten out of thirty-two students were randomly chosen for a focus-group discussion.

Design of the Study

The study employed a case study as the main design. A case study is a study of a 'bounded system' that emphasizes the unity and wholeness of that system but confides the attention to those aspects that are relevant to the research problems at the time (Stake, 1995). It is often used to narrow down a broad field of research into one or a few easily researchable examples. Hassan (2024) highlights that case study research allows a detailed exploration and analysis of a specific phenomenon in its real-life context. Therefore, the research design can provide a comprehensive understanding of the case and its dynamics, which may not be possible through other research methods. The main reason for the author to select this research design was its practical application in the educational field. According to Hassan (2024), case studies can help teachers evaluate students' learning progress, identify areas for improvement, and develop effective teaching strategies. Thanks to this, the researcher can observe the effectiveness of Grammarly intervention and the student's attitude toward the implementation in order to make some modifications in her class if necessary.

With the selected design, the study utilized explanatory sequential mixed-method approach with quantitative and qualitative data to get objective and subjective viewpoints. Firstly, quantitative data was used because it is found to produce objective results that can be interpreted through statistics and numbers (Hoover, 2021). Nevertheless, he also stated that quantitative can be a restrictive form of study because participants cannot tailor their responses or add contexts. In that respect, qualitative data can be a solution to such a limitation. From Ritchie and Lewi's (2003) viewpoint, qualitative data provides an in-depth understanding of the research participants related to their experiences, thoughts, history, social, and material situations. In this research, the quantitative findings gained through students' writing analyses and a questionnaire provided an overview of students' grammatical accuracy after using Grammarly and their perceptions toward the intervention. In addition to this, qualitative findings gained from the group discussion provided an in-depth understanding of the features known based on students' responses to the questionnaire.

Data collection & analysis

The data collection process underwent two phases. In the first phase, quantitative data was collected through two sources. Firstly, students' writing version 2, corrected and revised with Grammarly, of the two writing assignments were gathered and analyzed. The data gained from this source would help identify grammatical accuracy enhancement between the two writing assignments after the intervention. The second source of quantitative data was collected via a questionnaire which was designed based on the theory of the three perception indicators suggested by Robbins (2018) reviewed in the literature. The questionnaire was adapted and

modified from Dewi's (2022) questionnaire. It included eleven Likert-scale items ranging from 1 for strong agreement to 5 for strong disagreement. One rationale for adapting Dewi's (2022) questionnaire was that the research had a comparable goal to one of the two goals of this study, which was to investigate learners' perceptions of integrating Grammarly in English classes. The survey was piloted with ten students who were not taking part in the study, then it was revised before being officially sent to the participants.

In the second phase, a focus-group discussion with ten participants was held. Two open-ended questions were asked to get a deeper understanding of students' opinions toward the intervention regarding possible strengths and limitations of the tool based on their experience. Prior to the interview, the participants were informed about the time, location, and general purpose. The researcher also asked the participants for their permission to audio record the group discussion. The interview protocols of this study followed Creswell's (2009) guidelines, which included a heading, instructions for the interviewees to follow, questions for interviewees, and a thank-you statement. For analytical purposes, the discussion was audio-recorded and transcribed into text with the participants coded as Student A, B, C, and so on.

In terms of data analyses, quantitative data was analyzed using descriptive statistical approaches. Firstly, the grammatical errors in students' two writing assignments were analyzed. During the analysis process, the researcher counted the frequency of errors according to the four types of surface strategy taxonomy and calculated the mean score for each type. Afterward, the questionnaire results were synthesized by calculating the percentage frequency of each item. Furthermore, the qualitative data from the group discussion was analyzed following the sequential stages by Braun and Clarke (2006). Specifically, there are six steps in analyzing qualitative data. The first step, known as familiarizing with the data, involves transcribing the interviews and reading the transcripts repeatedly. In the second step, the initial lists of code are identified as a base for the next stage in which the researcher searches for the themes. In other words, in the third step, the researcher considers how different codes may fit together into a broader theme. The themes can be organized hierarchically, with higher-order themes or sub-themes. Afterward, the fourth step is to review the themes, in which the irrelevant themes are eliminated while other themes may be combined into broader ones. In the fifth step, there is a critical task to identify the central idea in each and provide a name that concisely captures that idea to support the last stage of the process, reporting the data. In the final stage of the analysis process, data from all sources were synthesized and compared to conclude the outcomes of the study.

Findings and discussion

Quantitative findings

Firstly, the results gained from the analyses of the students' writing assignments are presented in Table 2 hereafter.

From Table 2, students' improvement in grammatical accuracy from the first to the second writing assignment could be observable. The mean frequency revealed a moderate decrease in errors between the two assignments in total frequency and all four types of errors. On average, the number of total errors one student made decreased nearly one error from assignment 1 to assignment 2. Additionally, there was a decrease from 1.34 to 0.91 omission mistakes found in one student's assignment 2. Similarly, addition errors and misformation errors fell slightly 0.1 and reached 0.5 and 0.53 errors per student in assignment 2, respectively. Finally, a minor

decrease from 0.25 to 0.16 misordering errors was found between the two writing assignments.

Table 2.

The frequency of students' grammatical errors through the two writing assignments

Types of errors	Writing Assignment 1		Writing Assignment 2	
	Frequency	Mean	Frequency	Mean
Total	93	2.91	67	2.09
Omission	43	1.34	29	0.91
Addition	22	0.69	16	0.5
Misformation	20	0.63	17	0.53
Misordering	8	0.25	5	0.16

The results of the questionnaire regarding students' perceptions toward Grammarly intervention are summarized in Table 3 as follows.

Table 3.

Participants' perceptions of using Grammarly

	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
1. Students' perceptions of the interface of Grammarly					
1a. I find Grammarly easy to use.	78.13	15.62	3.12	0	3.12
1b. I find Grammarly easy to access.	64.95	28.81	3.12	0	3.12
1c. I find the Grammarly free service version efficient to my needs.	68.76	15.62	9.38	3.12	3.12
1d. I will continue using Grammarly in the future.	71.88	25.00	3.12	0	0
2. Students' perceptions of the effectiveness of Grammarly					
2a. Grammarly helps me identify and correct my grammar mistakes easily.	71.88	25.00	3.12	0	0
2b. Grammarly helps identify and correct my spelling mistakes easily.	75.00	21.88	3.12	0	0
2c. Grammarly helps identify and correct other kinds of mistakes like punctuation and word choice.	75.00	15.62	9.38	0	0
2d. Grammarly helps expand my grammar knowledge.	71.88	18.74	9.38	0	0
2e. Grammarly helps expand my vocabulary knowledge.	65.64	31.24	3.12	0	0
2f. Grammarly helps improve my expressions in writing.	68.76	18.74	12.50	0	0
2g. Grammarly helps me be more confident when I have to write something in English.	65.64	15.62	18.74	0	0

As reviewed in the literature, acceptance was one of the perception indicators (Robins, 2018). Generally, the statistics shown in Table 3 indicated that the participants positively accepted the Grammarly intervention. In the first four question items, a large majority of participants confirmed that they were satisfied with the interface of the Grammarly tool. More than 90% of

participants believed that Grammarly was easy to use, and more than 80% thought it was easy to access. Additionally, approximately 85% of the participants indicated their satisfaction with experiencing the free service version of Grammarly, while nearly one-tenth of the students shared a neutral opinion. Remarkably, a total percent of 96.88% of the respondents indicated that they would continue using Grammarly in the future despite a minor percentage being neutral (3.12%).

The other two indicators of perception, understanding and evaluation, were examined in the second section of the survey. The section asked about participants' perceptions of the effectiveness of using Grammarly. Overall, a vast majority of participants shared positive responses about the intervention since no disagreement was recorded in all question items of this section. Firstly, they indicated that Grammarly was beneficial to them in identifying and correcting their grammar and spelling mistakes. The percentage of the agreement and strong agreement was up to 96.88%. Moreover, around 90% of the respondents agreed that Grammarly could help them improve other types of mistakes like punctuation or word choice. Noticeably, that same percentage was observed in the number of participants whose grammar knowledge could improve thanks to Grammarly. Similarly, a majority of participants (96.88%) reported that Grammarly was effective in helping them improve their vocabulary knowledge. In addition, a considerable number of respondents indicated that Grammarly could help improve their writing expressions and foster their confidence in writing, with the percentage of agreement up to 87.5% and 81.62%, respectively. However, a noticeable number of participants shared a neutral opinion that Grammarly could help them express their ideas in writing more easily (18.74%) or be more confident in writing something in English (18.74%).

Qualitative results

Generally, the findings of the group discussion revealed several merits of Grammarly perceived by the interviewees. However, they also indicated the limitations of the tool. The results are explained in detail as follows.

Strengths of Grammarly

Sub-themes: convenience, error reduction, vocabulary and grammar knowledge enhancement

Around three-fourths of the interviewees revealed that the tool was convenient and easy to use.

“I think that it is very convenient to use Grammarly. I just need to log in and copy my writing, then it will immediately help me to check the errors.” (Student E)

More importantly, a majority of the interviewees emphasized that Grammarly effectively assisted them in reducing the mistakes in their writing. Specifically, eight students indicated that Grammarly helped them find and correct grammatical and lexical mistakes, and other kinds of mistakes such as punctuation or word choice in their writing.

“The use of Grammarly can identify errors in terms of grammar, spelling, and punctuation quickly and easily, which can help me improve my vocabulary and grammar knowledge and English expressions. Grammarly also suggests useful ways to correct the mistakes in my writing. I find the suggestions by Grammar understandable and useful to me.” (Student A)

In addition to this, most of the interviewees emphasized that Grammarly was beneficial in enhancing their vocabulary and grammar knowledge.

“Grammarly helps me to find the mistakes I made in grammar or vocabulary. The explanations of these mistakes help me to know why I made them and I think I can learn from them. So, I will try to avoid such mistakes in the future. I think I can improve my grammar and vocabulary knowledge thanks to that.” (Student C).

From the above, it could be drawn out that the results of the group discussion were associated with the quantitative results of the questionnaire. They reflected that students had positive perceptions of the interface of Grammarly and its functions. Besides, the tool could help improve their accuracy and foster their knowledge of grammar and vocabulary.

Limitations of Grammarly

Sub-themes: internet dependence, limited functions, writing contexts

One of the limitations of Grammarly revealed by the interviewees was that the tool depended on the internet connection to be accessed.

“The only thing that I am not happy about Grammarly is that sometimes I cannot access it due to the internet interruption or unstable connection.” (Student H)

Furthermore, another unfavorable feature of Grammarly revealed in the interview results was that the free version of Grammarly offered learners a limited number of functions. In other words, students were charged if they would like to use additional advanced correction functions.

“Grammarly helps me to identify my mistakes. However, for some kinds of mistakes, I need to pay some money to get suggestions on how to improve them.” (Student D)

Noticeably, some interviewees indicated a limitation in favor of the checker functions of Grammarly. Specifically, Grammarly tended to offer the feedback without considering the specific contexts, which could make the suggestions sometimes inappropriate to students' meanings or intentions in writing. This result was in line with Barrot (2022) and Winans (2021) that Grammarly tends to give feedback without considering the specific contexts, which may alter the students' intended meanings or tone in their writing.

“Sometimes I see that the suggestions of Grammarly are inappropriate to the contexts or my writing styles, which makes the correction irrelevant or unnecessary to me.” (Student B)

Discussion

First of all, Grammarly was found to help students reduce the frequency of grammatical mistakes in English writing. This was in line with the results of Sanosi's (2022) study which indicated that Grammarly assisted students in reducing the number of grammatical errors in their writing. Moreover, the findings of the survey and group discussion suggested students' positive perceptions of the Grammarly intervention. This was consistent with the studies by Faisal and Carabella (2023) and Dewi (2022). Noticeably, the study is hoped to contribute to the investigation of Grammarly intervention in enhancing grammatical accuracy in the context of a private college. In other words, it is expected that the study could help to solve a research gap mentioned in the literature regarding a few studies investigating the impact of Grammarly on grammatical accuracy in English writing.

Conclusion

This research aimed to investigate the effectiveness of using Grammarly in improving students' grammatical accuracy in writing and their attitude toward the intervention in English classes. Several conclusions could be drawn out from the quantitative and qualitative findings. Firstly, the analyses of the collected assignments revealed a reduction of grammatical errors between the two writing assignments. Secondly, the findings from the questionnaire indicated students' positive perceptions of Grammarly intervention. Finally, the group discussion highlighted students' attitudes toward the strengths and limitations of the tool. Noticeably, the strengths shared by students were in line with the questionnaire results.

Although the study was believed to be successful in achieving the research aims, there were still limitations to be considered. Firstly, although the quantitative findings indicated a decrease in grammatical errors between the two writing assignments, it was moderate. Hence, it is suggested that future studies should consider integrating other research instruments in addition to students' writing analyses or extending the time for Grammarly implementation so that students' progress in reducing grammatical mistakes could be more clearly observable. Secondly, the scope of the investigation was restricted to a limited number of 32 students. Therefore, the results of this study might be workable with other groups of students with some similar characteristics to the studied group. In other words, it would be hard to generalize the findings of this study to the whole population. Therefore, other researchers can consider expanding the scope of the study with more participants for a better and more reliable generalization of the results.

Based on the findings of this research, there are suggestions for English teachers to improve English teaching. First and foremost, the research findings indicated that the implementation of Grammarly could bolster learners' grammatical accuracy and were well perceived by students. Therefore, English teachers are highly recommended to apply the tool in their classes to help students upgrade their writing performance. Moreover, the findings highlighted several limitations of the Grammarly free version regarding the limited functions and the impractical correction suggestions. Hence, it is advisable for teachers to implement Grammarly in combination with other writing evaluation methods such as peer-checking or teachers' feedback to maximize the effectiveness of the writing evaluation activities.

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Biodata

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The Impact of Computer-Based Activities and Non-Computer-Based Activities on College Students' Learning Engagement in English Lessons

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ABSTRACT

Keywords: Computer-Based Activities, Non-Computer-Based Activities, College students, Learning Engagement, EFL

The impacts of computer-based activities (CBAs) and non-computer-based activities (NCBAs) on the learning engagement of college students in English as a Foreign Language (EFL) courses at FPT Polytechnic College are investigated in this paper. The study involved eighty second-year students, followed a mixed-methods approach with a within-subject design spanning six weeks. Participants in courses include just CBAs during the first three weeks, followed by NCBAs in the next three weeks. To evaluate students' cognitive, emotional, and behavioral involvement in different learning environments, data were gathered by means of surveys and interviews. With 55% of participants choosing NCBAs for concept sharing and 58.75% expressing enthusiasm for class involvement, the results show that NCBAs significantly raised students' cognitive and emotional engagement. On the other hand, CBAs linked with lower participation levels on several other criteria. The paper underlines the need to include NCBAs to improve the learning environment and advises teachers to use a balanced approach in the evolution of EFL curricula. In language-learning environments, this paradigm increases student involvement and raises educational results.

Introduction

Academic performance depends critically on student participation in language acquisition, particularly in English as a foreign language (EFL) settings. The integration of digital technology in learning environments has made the investigation of computer-based activities (CBAs) for enhancing engagement a top research focus that is absolutely important. Research on how technology might improve student motivation, involvement, and active learning in English language education has shown positive results (Chapelle, 1997; Warschauer, 2011). On the other hand, classic non-computer-based activities (NCBAs), like group discussions, role-playing, and paper-based exercises, are indispensable in many schools. Their chances for experiential learning and personal interaction help to increase involvement by direct communication (Brown, 2008).

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Though both approaches have special advantages, the argument on how well CBAs compare to NCBAAs in raising learning engagement keeps on. By offering customized feedback, interesting experiences, and access to thorough materials, CBAs help to increase student autonomy (Reinders & Benson, 2017). Some academics contend that overuse of technology could cause distractions and less deep cognitive involvement (Carr, 2020). On the other hand, NCBAAs have been commended for encouraging cooperation, critical thinking, and social interaction; however, they might not always fit particular learning environments and speeds (Dörnyei, 1998).

As can be seen, much research has been conducted to show NCBAAs and CBAs' efficiency. However, there are rather few studies comparing the effects of these two kinds of activities on the learning engagement of college students. Therefore, the purpose of this study is to investigate how CBAs and NCBAAs affect college students' learning engagement in English classes. It looks at how students view and participate in different kinds of activities to find the one or combo of approaches that best improves active involvement, drive, and learning results in an EFL classroom. The findings can help teachers and curriculum designers enhance English language instruction by means of engagement techniques.

Literature review

Students' learning engagement

Typically, three linked dimensions define engagement: behavioral, emotional, and cognitive involvement.

Behavioral engagement refers to students' participation in academic activities like class attendance, homework completion, and classroom discussion participation (Fredricks et al., 2004). Students who show behavioral engagement are reportedly more inclined to participate in school events, therefore improving their academic performance. For English language learners, participation in interactive activities, including debates, role-plays, and language games, helps to enhance practical language use and skill development, thereby raising engagement (Dörnyei, 1998).

Students' affective reactions to the learning environment, that is, their sense of belonging, interest, and enjoyment in school, define their emotional engagement in that regard (Skinner, 1965). In EFL classes, emotional involvement is very important since it helps build good relationships between teachers and students, reducing fear and increasing students' readiness to participate in language exercises. According to Klem and Connell (2004), kids with emotional ties to their professors and school often exhibit higher academic drive and endurance.

Cognitive engagement is the degree of students' mental efforts toward understanding and mastery of the course of instruction (Pintrich & De Groot, 1990). Cognitively involved students reach mastery by using critical thinking and self-regulated learning techniques. In particular, this is extremely relevant in language acquisition since cognitive involvement could include considering language rules, developing vocabulary learning plans, or using metacognitive techniques to improve reading comprehension. Long-term memory and the application of knowledge in novel environments are predicted by cognitive involvement (Mayer, 2005).

Computer-based activities (CBAs)

Students now have an easier time than ever to benefit from technology developments that enable them to access and examine an almost limitless range of human-made resources (Vu, 2022). Developed by Sweller (1988), cognitive load theory clarifies how CBAs might improve

learning by reducing extraneous cognitive tasks. Through multimedia resources combining text, images, and audio, effectively designed CBAs can help minimize cognitive overload and enhance understanding, thus facilitating learning (Mayer, 2005). Using several learning channels, language-learning programs that combine vocabulary exercises with audio pronunciation guides improve students' information processing. Many students from Phenikaa University believed that digital games helped them learn vocabulary more effectively and usefully (Trinh et al., 2022).

Studies show repeatedly that CBAs greatly increase student involvement. CBAs offer one major benefit in their ability to offer interactive and customized learning opportunities. According to Warschauer and Healey (Warschauer & Healey, 1998), computer-based assessments give students immediate feedback, so encouraging constant engagement by allowing them to instantly correct mistakes. Since it can greatly speed up the learning process, instant feedback on grammar, vocabulary, and pronunciation is especially important in language acquisition (Reinders & Benson, 2017). Online quizzes, virtual simulations, and language-learning apps among other CBAs improve involvement by providing interactive and tailored learning opportunities (Reinders & Benson, 2017).

Moreover, CBAs allow different learning environments and preferences, so offering a level of personalizing is difficult to reach in traditional classrooms. According to Keller (Keller, 2010), adaptive learning technologies, which change task difficulty based on individual student performance, have great value. Adaptive computer-based tests in English language instruction provide activities tailored to students' degrees of proficiency, maintaining motivation and reducing boredom or frustration.

Computer-based activities present different difficulties even if they have many benefits. In the classroom, excessive technology use could cause cognitive overload or distraction. Carr (2020) suggests that the constant flood of digital data could reduce students' capacity for deep, concentrated learning, so fostering a taste for surface-level processing. In language learning, where precision is crucial, students might give quick task completion top priority over a thorough grasp of language ideas.

The digital divide stands for the differences in technology access among students from different socioeconomic levels. While CBAs can raise learning results, if particular students lack access to dependable internet or digital devices, they could also aggravate educational inequalities (Selwyn, 2004). Teachers trying to include CBAs in their courses find this difficult since they have to ensure fair access to the necessary technological tools for every student.

Moreover, some academics argue that CBAs might lack the degree of emotional involvement and human interaction typical of conventional face-to-face education. Though CBAs offer interactive experiences, Dörnyei (1998) notes that they might not have the emotional depth and social connection found in direct teacher-student contacts. This is especially relevant in language acquisition since developing strong personal relationships can boost inspiration and help reduce language anxiety (Horwitz, 2010). Therefore, CBAs should be used in combination with non-digital solutions, encouraging emotional involvement and personal interaction.

Non-computer-based activities (NCBAs)

Vygotsky's "Zone of Proximal Development" highlights the importance of social interaction in the learning process, implying that learners do better when working with more knowledgeable peers or instructors (Vygotsky, 1978). Non-computer-based activities make use of this by encouraging cooperative learning settings whereby students improve one another's knowledge utilizing communication and group projects.

As Kolb (1983) defines, experiential learning is a basic component of NCBAAs. Experiential learning helps the application of knowledge in pertinent contexts, improving cognitive engagement and enabling the transfer of knowledge to new circumstances. Kolb's model emphasizes the need for learning via direct experience, reflection, and application, which NCBAAs promote through activities like role-playing, debates, and real-world problem-solving tasks (Kolb, 1983).

Non-computer-based activities have various advantages in increasing student involvement and supporting major learning opportunities. The main advantages are improvement of interpersonal communication and teamwork abilities. Unlike computer-based activities that could limit in-person engagement, NCBAAs need direct student communication enabled by group discussions, debates, or cooperative projects. According to Johnson and Johnson (1987), cooperative learning programs entail students working in small groups toward common goals, improving academic achievement, and developing social and communication skills. These exercises help students in English as a foreign language (EFL) contexts to practice language in real, communicative settings, therefore enhancing both linguistic competency and speaking confidence (Brown, 2008).

NCBAAs improve teamwork and also foster critical thinking and problem-solving skills. According to Prince (2004), active learning techniques including NCBAAs outperform conventional lectures in developing critical thinking and improving memory of knowledge.

Moreover, NCBAAs create engaging and individually meaningful learning environments that help to foster emotional involvement. Motivation and persistence depend on emotional engagement, that is, pupils' emotive reactions to learning activities. Through role-playing and storytelling, among other activities, NCBAAs help students participate fully in the learning process, often leading to increased curiosity and enjoyment. Role-playing exercises help EFL students to utilize language in imaginative and contextually relevant ways, therefore reducing language anxiety and perhaps encouraging a sense of achievement (Horwitz, 2010).

NCBAAs offer certain challenges even if they have many advantages. One important restriction is the possible fluctuation in student involvement. While some students thrive in interactive group environments, others may find it difficult to participate successfully for reasons including shyness, lack of confidence, or poor subject-matter knowledge (Cohen & Lotan, 2014). Less confident students in language classes may show resistance to participating in debates or role-plays, which would cause differences in involvement rates. Teachers should consider these dynamics and create encouraging surroundings that let every student contribute (Dörnyei, 1998).

The time-consuming character of NCBAAs presents still another difficulty. Generally speaking, debates, group projects, and hands-on experiments demand more time for planning and execution than conventional lectures or online assignments. Teachers may find it difficult to balance the time needed for thorough, hands-on activities with the demands of curriculum coverage (Prince, 2004). Moreover, NCBAAs could call for more classroom supplies, physical objects, or space for group projects, which would provide difficulties in environments with limited resources.

NCBAAs may also sometimes be lacking in the timely feedback that computer-based activities provide. CBAs provide immediate feedback via quizzes or automated assessments, whereas NCBAAs depend on evaluations from teachers or peers, resulting in a longer feedback delivery time. The delay in feedback may impede students' capacity to recognize and rectify errors promptly (Kulik & Kulik, 1988). Peer feedback and reflective discussions during NCBAAs

provide deeper, formative insights that enhance long-term learning.

Research Questions

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

1. In which aspects do computer-based activities outweigh or fall behind non-computer-based activities in engaging college students in English lessons?
2. What are college students' opinions about using computers in English lessons?

Methods

Pedagogical Setting & Participants

This research was carried out at FPT Polytechnic College, examining the effects of CBAs and NCBA on student engagement in English lessons. The study involved 80 second-year students enrolled in English Level 2.1, corresponding to the A2 level of the Common European Framework of Reference for Languages (CEFR). The coursebook utilized by the students was American Language Hub Level 1.

The instructional approach utilized a blended learning method. Students engaged with the Language Hub platform in both classroom and home settings to access interactive exercises, quizzes, videos, and supplementary materials. This digital platform facilitated flexible and continuous interaction with course content, allowing students to enhance their learning beyond the classroom.

The selection of participants was based on their high frequency of using computers in both English and other subjects at FPT Polytechnic College. This offers a benefit since students rapidly adjust to activities using technology tools; however, it also presents a difficulty when students try to work alone without computer support.

This study investigates the impact of each activity type on learning engagement in the framework of language acquisition at the A2 level using a group of students evaluating the efficacy of combining digital learning tools with conventional approaches.

Design of the Study

Using a mixed-methods approach, the study included interview methods for data collecting and analysis together with a within-subject design. This method helped the researcher to fully grasp how CBAs and NCBA affect student involvement in English classes.

A key component of the study was the within-subject design, in which the same group of students participated in courses focused on two different kinds of activities - CBAs and NCBA - over several periods. With each student serving as their control, this design lets researchers consider personal variances. This approach enabled a direct comparison of the effects on student involvement in various forms of activity. The researcher used questionnaires to gather quantitative data on student experiences, addressing issues of student preferences for different activities and involvement.

Following the intervention, twenty randomly selected participants underwent interviews to provide qualitative data and improve knowledge of the viewpoints and feelings of the students about the activities. The mixed-methods approach lets the researchers triangulate their results, providing a complete picture of how well CBAs and NCBA increase student participation in

English lessons.

Data collection & analysis

This study employed a structured and systematic sampling procedure over six weeks, during which participants participated in lessons incorporating two types of activities: CBAs and NCBAAs.

In the first three weeks, students engaged in lessons utilizing exclusively CBAs to enhance their listening, writing, reading, vocabulary, and grammar skills within the English language. The activities were conducted through digital platforms including Kahoot, Quizziz, Blooket, Language Hub, Padlet, Bamboozle, and Wordwall. Speaking activities were conducted without computer assistance to ensure a balanced approach to language practice.

In the next three weeks, the emphasis has transitioned to 100% NCBAAs, enabling students to participate in hands-on and interactive activities that address all facets of language learning. The activities included charades, word galleries, sentence-building partner exercises, mind-map drawings, presentations, debates, and narratives. This phase aimed to improve cooperation and innovation, so countering the previously used technologically driven approaches.

Following the six-week courses, student impressions of their experiences with both kinds of events were gathered using Google Forms. This aimed to compile quantitative information about students' involvement, preferences, and opinions of the efficacy of CBAs and NCBAAs. The survey questions were developed in line with Yunik's Student Engagement Criteria table (Yunik, 2020). Her development of this table drew on the three divisions of student participation suggested by Trowler (2010) and Fredricks, Blumenfeld, and Paris (2004).

Table 1

Student engagement criteria

	STUDENT ENGAGEMENT CRITERIA	
	Indicators	Sub-Indicators
Cognitive	Comprehension	response to the teachers' questions
		do the teacher's task
	Share ideas	communicate ideas to the classroom help each other to do the tasks.
	Preview knowledge	answer the teachers' questions related to the last materials
Emotional	Interest	eager to join the class
		do the classroom activities
	Worried	be afraid to make mistake keep silent
Behavioral	Attention	follow and do the teachers' instruction
	Effort	do the tasks in or out of the classroom
		submit the task on time
	Classroom Participation	participate actively
	Responsibility	be responsible
follow the lesson on time		

The quantitative information collected from the surveys came from descriptive statistics. This involved computing statistical measures, including means, medians, frequencies, and standard

deviations, to aggregate student responses on their involvement and choices for CBAs and NCBA. Descriptive statistics helped to clearly show general trends and patterns in the data, so clarifying the effects of different activities on student involvement.

Interviews were done to gather qualitative information about students' opinions of these events. The interviews helped better understand how students view and feel about their educational experiences, so clarifying the influence of different activities on their involvement and learning results.

Content analysis was applied to the qualitative information gathered from the interviews. This approach involved methodical classification and coding of responses to find recurrent themes, patterns, and attitudes voiced by students on their experiences with the activities. Employing the examination of interview material, researchers were able to acquire a more thorough understanding of the viewpoints, emotions, and recommendations of students about CBAs and NCBA.

The sampling technique enabled a comprehensive investigation of the effects of different activities on student participation in English lessons, providing significant new perspectives on the effectiveness of technology integration in language learning and underlining the benefits of classic interactive approaches. The study was set up to help produce significant findings about the respective effects of CBAs and NCBA on student learning.

Findings and discussion

Students' view on the impacts of NCBA compared to CBAs on their engagement in English class

Students' cognitive engagement

In terms of comprehension, 41.25% of students said NCBA helped more effectively answer teachers' questions than CBAs, which were judged more beneficial by 27.5% of students. A significant 31.25% of students were undecided, showing no clear preference for either method. Concerning task performance, over half (52.5%) of the students believed they performed better in NCBA, while 28.75% expressed greater confidence in completing tasks during CBAs, and 18.75% remained neutral regarding their preferences between the two formats.

Besides, regarding the communication of ideas, 55% of students indicated that NCBA more effectively facilitated idea exchange during lessons. Conversely, 22.5% of students perceived CBAs as more effective in this context. Additionally, 22.5% expressed neutrality, suggesting an absence of a definitive preference between the two communication methods. NCBA classes significantly enhanced levels of student collaboration in mutual assistance. A significant majority of 47.5% of students indicated that they assisted their peers more effectively in lessons through the use of NCBA. In comparison, 37.5% of students indicated that CBAs promoted increased collaborative interactions. Only 15% of participants exhibited neutrality.

A high percentage of students, 45%, reported that they engaged more effectively in reviewing and consolidating knowledge during NCBA lessons. In the meantime, 37.5% expressed a preference for CBAs when previewing content. A minority, 17.5%, did not express a definitive inclination towards either type of activity in this specific dimension of engagement.

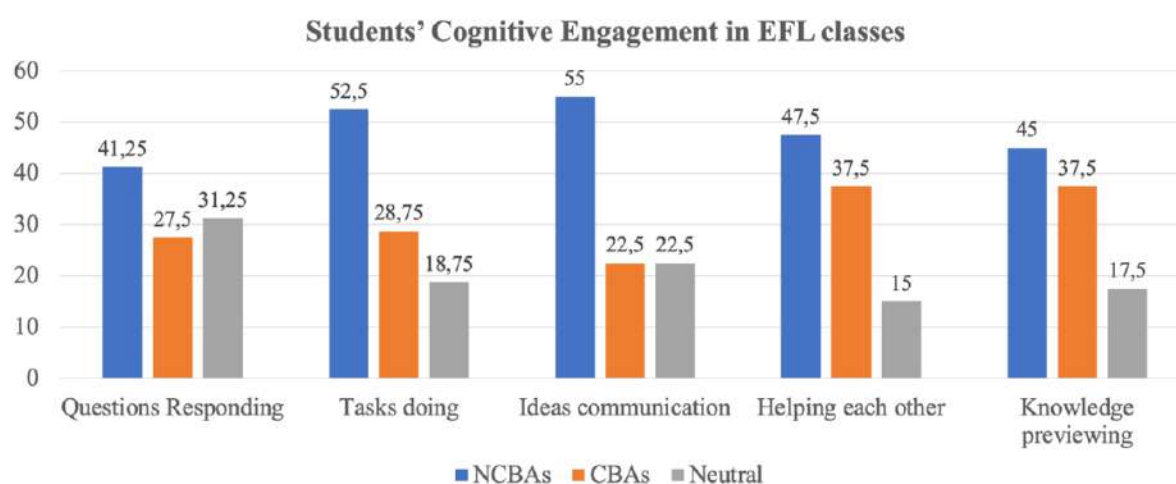
The findings indicate that students typically exhibit greater cognitive engagement in NCBA in various dimensions of learning. For example, 41.25% of students indicated that NCBA enhanced their ability to respond to questions, while 52.5% reported that they were more

effective for task completion. This suggests that traditional, hands-on activities like mind-mapping and storytelling may create more engaging environments for understanding and task execution. Furthermore, 55% of students indicated that NCBAs enhanced peer collaboration, probably attributable to the face-to-face and interactive characteristics of these activities, which promote group work and direct communication.

Conversely, 37.5% of students preferred CBAs for knowledge previewing knowledge, underscoring the advantages of digital tools such as quizzes and language applications in offering organized and engaging methods for material review. Nonetheless, a smaller proportion of students regarded CBAs as effective in facilitating interaction and idea communication, with merely 22.5% expressing a preference for these methods. This indicates that although CBAs can improve specific elements of learning, they may not entirely replicate the collaborative and communicative dynamics present in traditional classroom environments.

Fig. 1

Students' cognitive engagement in EFL classes



Students' Emotional Engagement

In terms of student interest in the classroom, 58.75% of students demonstrated a higher willingness to engage in classes employing NCBAs, whereas only 23.75% preferred CBA-based lessons. 17.5% indicated neutrality on this matter. A majority of 55% of students reported increased involvement in classroom activities during NCBA sessions. Conversely, only 28.75% of students reported increased engagement during CBA classes, whereas 16.25% of participants expressed neutrality.

Regarding student anxiety, 53.75% reported a reduction in concerns about making mistakes in NCBA classes, whereas only 18.75% noted a decrease in fear during CBA-based lessons. Approximately 27.5% of students indicated a neutral stance on this issue, implying a diverse reaction concerning the influence of both methods on their confidence. Half of the students indicated that they typically remained silent during CBA lessons. In contrast, 30% of students in NCBA classes did not voice their opinions, whereas 20% maintained a neutral stance on this matter.

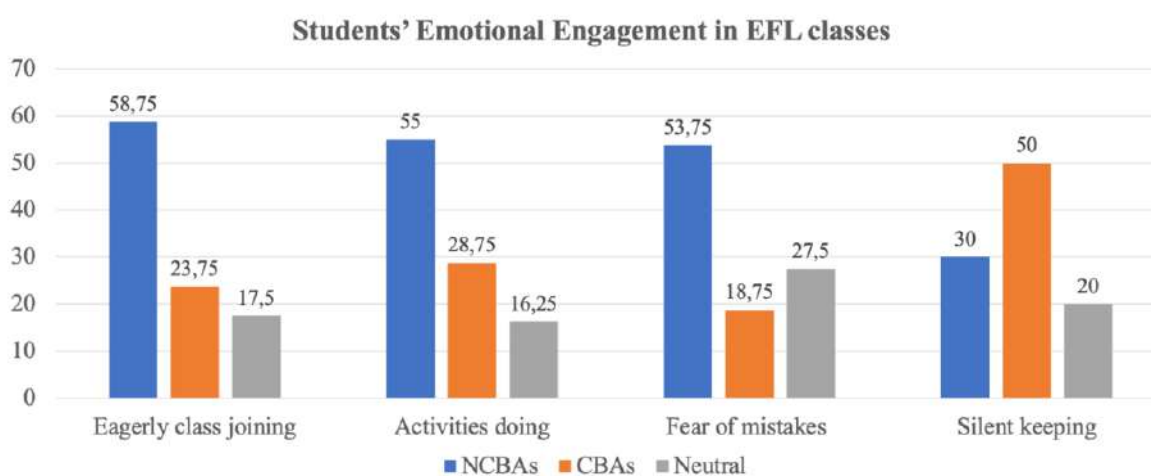
The findings demonstrate that NCBAs enhance emotional engagement across various domains, notably in motivating students to enthusiastically attend classes and engage in activities. 58.75% of students demonstrate increased enthusiasm for NCBA lessons, indicating that

interactive, face-to-face, or group-based activities foster a more stimulating and engaging classroom environment. The 55% preference for NCBA in activities indicates that these tasks likely provide a more engaging and interactive learning experience, fostering greater involvement.

The elevated percentage of silent keeping in CBA sessions (50%) indicates the capacity of CBAs to facilitate passive learning. The personal nature of digital platforms may lead to reduced communication and collaboration among students. The increased apprehension regarding errors in CBA classes reinforces this notion, as students report greater comfort and reduced anxiety in NCBA sessions (53.75%).

Fig. 2

Students' emotional engagement in EFL classes



Students' Behavioral Engagement

Regarding student attention in the classroom, 67.5% of students indicated a higher likelihood of following instructions during NCBA. Only 16.25% of students indicated improved compliance with instructions in CBAs, while another 16.25% remained neutral.

A majority of students (60%) reported greater consistency in task completion during NCBA classes compared to outside the classroom. On the contrary, 22.5% indicated increased diligence during CBA sessions, while 17.5% were undecided. When it comes to task submission punctuality, 48.75% of students indicated that NCBA served as a motivating factor for adhering to deadlines. In the context of CBAs, 28.75% of participants expressed a similar viewpoint, while 22.5% maintained a neutral stance regarding timely submission.

In terms of active participation, 57.5% of students reported greater involvement during NCBA lessons, whereas 26.25% indicated increased engagement in CBA lessons, and 16.25% remained neutral.

67.5% of students reported an increased sense of responsibility when participating in NCBA. Only 20% of students expressed a preference for CBAs in fostering a sense of responsibility, whereas 12.5% remained neutral. For punctuality in lesson attendance, 57.5% of students indicated that NCBA were beneficial in maintaining their schedule, whereas 28.75% considered CBAs to be more effective for this objective. 13.75% of the students expressed neutrality regarding this aspect.

The findings express that NCBA significantly enhance behavioral engagement in EFL classes.

The elevated percentages for adherence to teacher instructions (67.5%) and responsibility (67.5%) suggest that students exhibit greater accountability and responsiveness during non-computer-based activities. The results likely indicate the structured, face-to-face format of NCBA, wherein immediate feedback and personal interaction with the instructor foster a heightened sense of obligation and concentration.

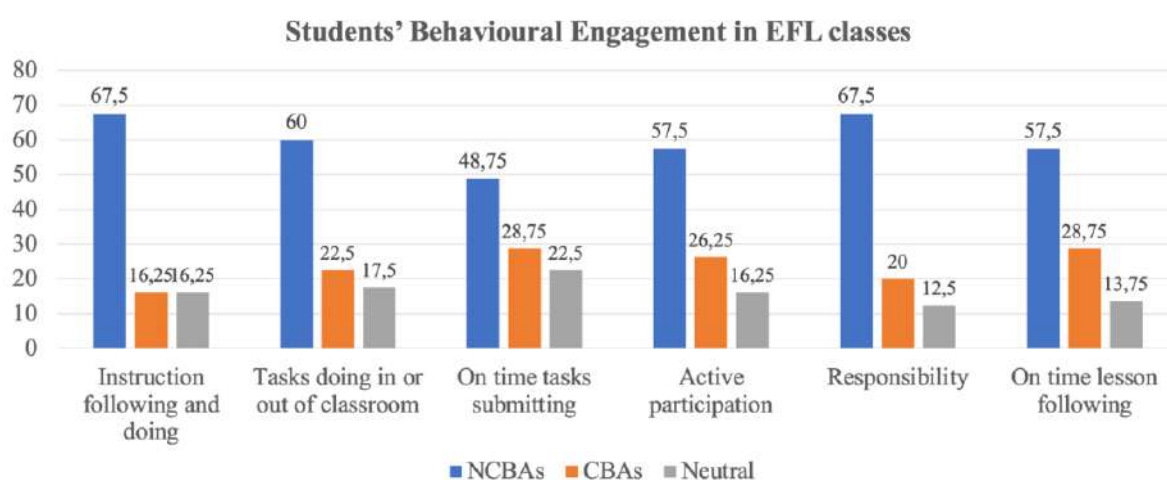
The elevated rates of task completion (60%) and on-time submission (48.75%) during NCBA sessions substantiate the notion that these activities promote a more disciplined learning environment. This may result from the concrete, practical nature of these tasks, which can appear more manageable and less abstract compared to digital assignments in CBAs.

Active participation was significantly higher in NCBA lessons (57.5%), indicating that traditional or interactive methods, such as group work, presentations, or role-playing, may foster a more engaging classroom environment. CBAs, despite being interactive, may not foster the same degree of personal engagement due to their frequently isolated or individualistic nature.

Nonetheless, CBAs retain certain advantages, especially in assisting students with timely lesson adherence (28.75%). This can be ascribed to the structure and adaptability of digital tools that facilitate self-paced learning. However, the lower degrees of responsibility and involvement noted during CBAs point to the possibility of disengagement in the lack of sufficient scaffolding from these instruments.

Fig. 3

Students' behavioural engagement in EFL classes



Students' other opinions about using computers in English class

Students' reflection on CBAs class

Student preferences in CBAs classes revealed some important new information about the components they thought most useful and interesting. The comments revealed different points of view on the advantages of CBAs as well as open acceptance of students using computers in class.

Many of the students expressed thanks for the availability of online materials during CBA sessions. Many people have said that improving vocabulary comprehension and task completion efficiency requires the use of tools such as Google Translate and online dictionaries. The availability of these tools allowed quick clarification of unknown words or phrases,

enhancing understanding and performance right away. The students saw this autonomy as beneficial since it would help them to grow at their own speed and lessen reliance on direct teacher intervention.

Several students said that using computers enabled a more effective interaction with the course of instruction. The clear reading of questions and directions on screens made possible by the digital format helped to access and review materials. Students who preferred interacting with visual and written materials especially benefited from this accessibility tool. The ability to negotiate several computer-mediated lesson sections helped to maintain lesson flow.

Some students admitted that occasionally they used the computers for activities unrelated to the English class. They revealed that throughout the class they were working on projects for other disciplines. Although this not is the intended use of class time, this scenario emphasizes a possible disadvantage of computer-based assessments since students may be distracted by the several features and tasks offered on computers.

During interviews, students provided several suggestions for how CBAs might be more engaging and effective in English classrooms. The comments underlined the need for a more systematic application of technology to lower distractions and for more variety in tools.

Most of the students said they preferred more diversity and participation in CBAs. The teachers assigned to provide these CBA experiences to their students were directed to improve the CBA's enjoyment and interactivity. Teachers should, the students suggested, include more varied tools and platforms in the CBA. The CBA's specific recommendations for digital tools cover games, tests, and several collaborative digital platforms. The students thought that different digital tools would help them to better understand the content and enable a more interesting CBA.

Many students suggested that using one computer per group would improve the output of group projects. Their justification was that using one tool would help the group to become more cohesive. Some students suggested that several groups working on different projects close together could create a type of "studious noise" fit for improving general concentration in the library. The group members expected that, in a condensed form of a CBA, their arrangement would improve communication and cooperation.

Some students suggested that teachers should keep an eye on and control how students use screens during CBA classes. Issues about the possible influence of the internet and different initiatives on students' attention during classwork surfaced. The students thought they would be more sensitive to the expectations placed in the classroom if their professors used internet control. Students thought this policy would help them stay on target and lower the temptation to use computers for non-class-related purposes, thus preserving a better degree of concentration and output.

Students' reflection on NCBA's class

The interviews revealed several points of view on students' choices for NCBA's in English courses. The comments stressed better communication, more concentration, and different personal tastes. Many students said NCBA's helped them to engage more directly with peers and teachers. Independent of digital tools, the participants valued the opportunity for direct communication, idea sharing, and teamwork. This direct involvement improved students' speaking abilities, helped them understand the lesson materials, and inspired more honest questions. Most students thought that improved communication helped to create a more dynamic and supportive classroom.

Many students said their focus during NCBA's was better than that during CBAs. The lack of

computers or digital screens allowed more participation and a better understanding of the course instruction. The lack of technology, the students observed, lessened distractions and helped them to concentrate more on the teacher and the given assignments. The participants thought that NCBAAs helped them to focus on language acquisition.

While most students appreciated NCBAAs for their communication and focus, one student expressed dissatisfaction, suggesting a lack of fun in the NCBAAs classes. From this student's point of view, students have different preferences and learning styles; some feel NCBAAs to be less interesting or motivating than CBAs. Throughout the interviews, students shared their ideas on possible classroom improvements to NCBAAs. The answers were mostly positive; most of the students wanted the continuation of these events.

Many students showed a strong desire to attend extra NCBA-based courses. These interactive and communicative elements improved peer interaction and increased involvement with the course of instruction. An increased frequency of NCBA sessions would, according to students, enhance their learning experience by giving them more chances to participate actively, work well with the team, and develop their real-life communication abilities. Many participants underlined how the interactive, in-person character of NCBA events improved the efficacy and enjoyment of the educational process. A small percentage of students did not provide particular recommendations for enhancing NCBA offerings. They either chose not to comment on possible improvements or found the NCBA sessions' present arrangement to be good while they were undergoing the interview process.

Conclusion

This study sought to investigate how students' cognitive, emotional, and behavioral participation in English as a Foreign Language (EFL) classes responded to CBAs and NCBAAs. With courses split into three weeks of CBAs and three weeks of NCBAAs, a mixed-methods approach was used combining surveys and interviews.

The results showed that NCBAAs were usually better at raising students' learning engagement. More students claimed that NCBAAs improved their capacity for answering questions, clearly expressing ideas, and participating actively in class. Students said NCBAAs encouraged emotional involvement by inspiring them to actively participate in classes, finish assignments with confidence, and reduce their anxiety about making mistakes. Students reported better task completion, more responsibility, and timely lesson follow-up, so NCBAAs showed a good influence on behavioral engagement. Although CBAs made it easier for students to access online tools like Google Translate and dictionaries, many of them claimed to use computers for other courses, which reduced engagement. Therefore, the combined approach might improve student involvement by including interactive communication with the strategic use of digital resources.

A limitation of this research is that the sequence of the lessons may have influenced the outcomes. Given that CBAs were conducted prior to NCBAAs, it is possible that students exhibited greater engagement in the latter, potentially due to novelty or adaptation to a more interactive approach. The order effect may have introduced bias in the comparison of the two methods.

Future studies should incorporate teachers' perspectives to obtain more objective and comprehensive insights. Gathering educators' perspectives on both CBAs and NCBAAs would enhance the analysis, elucidating instructional strengths and challenges. Furthermore, varying

the sequence of CBAs and NCBAAs among different groups may mitigate potential biases in the findings and enhance the comprehension of their effects on student engagement.

Acknowledgement

I sincerely appreciate the participation of 80 students in this research. Their active engagement and feedback were crucial in shaping my findings and exploring effective teaching methods. I am also deeply grateful to the school administration for their support, providing essential resources and access to facilitate the research process. Their cooperation made this study possible.

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Biodata

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Vietnamese College Students' Perception Towards Using TikTok for Independent English Speaking Practice

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ABSTRACT

Keywords: Perception, MALL, TikTok Duet, technology-assisted language learning, EFL, Independent learning, Vietnamese students, Speaking

With the rise of digital platforms, TikTok has emerged as a popular social media platform with potential applications in English language learning. Among its features, TikTok Duet, allows users to create split-screen videos with others, presenting unique opportunities for practicing speaking skills. This study explores non-majors' perceptions of using TikTok Duet to independently improve their English speaking skills. Participants were students at an elementary English level at a private college in Vietnam, including 9 interviewees and 40 students completing questionnaires. The study indicated that most students felt TikTok Duet enhances their English speaking, pronunciation, and confidence, and even grammar and vocabulary. However, some students expressed reluctance to use TikTok Duet due to privacy concerns, limited response time and technical issues. The study suggests implementing technical support, offering privacy protection measures, and providing external incentives for students to engage with this practice.

Introduction

With the rapid growth of digital platforms, social media technology has evolved into a dynamic educational instrument that offering new learning approaches. TikTok is one of these social network platforms that has become very popular, especially among younger people. TikTok has potential for educational purposes in addition to its entertainment value, especially for communication skills. TikTok Duet's feature allows users to create a parallel video to an original video, meaning they can shoot their video next to others. This offers language learners an immersive speaking practice experience. Although TikTok duet offers significant benefits, studies were limited on its usage for independent English practice for Vietnamese students. Understanding their experiences as well as perceptions of benefits and challenges is one way to gauge their acceptance. Therefore, this research was conducted on how students at a private college perceived using TikTok Duet in their speaking practice independently.

Literature review

Student Perceptions of Social Media in Education

In the past decade, studies on social media (SM) in education have shown a positive expectation that students may be prepared to adopt social media networks (SM) for learning purposes in spite of mixed perceptions. For example, Smith (2016) found that SM is a “double-edged sword” in education. Despite several potential advantages for facilitating learning, SM is also considered a distracting factor that obstructs learning for students. According to Aloraini and Cardoso (2020), different student levels (i.e., beginners and advanced students) have different perceptions toward SM, with advanced learners showing more reluctance to use it for academic purposes. Similarly, Alshalawi (2022) reviewed the literature on social media networks and explored that many students appreciated the value of social media for learning, especially for higher education institutions.

Mobile Assisted Language Learning (MALL)

Research consistently shows that learners have a positive perception of Mobile Assisted Language Learning (MALL), which significantly enhances their learning experiences and ability to learn independently. According to Wagner et al. (2016), applying MALL enhances its quality and reflects modern educational trends by providing constant access to study resources anytime and anywhere, serving as a tool for developing individuals in an informational society capable of mobile-assisted lifelong learning. This perspective is further reinforced by a meta-analysis conducted by Taj et al. (2016), which confirmed that MALL positively impacts EFL learning, especially in vocabulary acquisition and instruction. Additionally, Azli et al. (2018) pointed out that the respondents, who are English learners as a second language, strongly believe that MALL plays an essential role in autonomous learning and interactive learning. Finally, the research by Luu et al. (2021) has shown specific mobile apps' high effectiveness in improving students' speaking skills.

TikTok for English Practice

TikTok is a YouTube-like app where users can upload videos to their accounts. The difference is the duration of the videos: TikTok only allows short videos, while YouTube allows longer ones. Several studies suggest that using Duet on TikTok can enhance learners' English proficiency across several language skills, including writing, reading, and speaking. Consider the findings of Nurwinda and Ambarwati (2024), which indicated that almost all of their experiences showed a positive outcome regarding using TikTok as a learning tool for practicing speaking. Most participants found TikTok engaging for this purpose because of its novel and interesting features. One feature usually mentioned by students is the "duet me" challenge. The TikTok Duet feature enables users to create a video alongside an original video, allowing them to film their content side by side with others. Students show appreciation for the interactive platform and ease of navigation. In a similar line, Hamsia (2024) investigated the usage of TikTok in an English as a Foreign Language (EFL) classroom and highlighted a considerable improvement in speaking skills. The study suggested that the main benefit of utilizing TikTok in educational settings is its ability to transform traditional language learning methods into engaging and interactive experiences. Zhen et al. (2022) focused on TikTok Duet, specifically the Duet Challenge, which allows users to develop conversational skills. The study found that after participating in the Duet Challenge, students improved their grammar, vocabulary, pronunciation, and interactive communication skills. This suggests that TikTok Duet could enhance ESL learners' conversation skills and serve as an effective interactive learning tool for teaching specific targeted skills in ESL.



Figure 1: Duet Tiktok challenge (Duet with Bees)

Independent Language Learning/Speaking Practice

In the scope of this study, Independent Language Learning (ILL) is defined as learners taking responsibility for their learning processes, such as goal setting, learning approaches, and assessment, especially outside classrooms. The topic of independent language learning has been extensively investigated recently with positive results. For example, Tran (2021) found that non-English major students had a positive attitude toward autonomous language learning and acknowledged its importance, yet they were uncertain about their own behavioral attitudes toward it. In addition, Yusnimar (2019) explored the connection between independent learning and teacher guides in improving speaking among college students. The results highlight that the independent learning approach with teacher guidance significantly enhanced the students' performance in English-prepared talk. Similarly, Snow et al. (2017) studied Chinese students' independent language learning practices in an exam-focused setting. The study suggested that successful English learners often utilize a variety of supplementary materials and practice to improve their language skills. This indicates a proactive approach to language learning, where students actively seek opportunities beyond classroom instruction. It is essential for teachers to prepare students for the challenges they may face during independent language practice. By informing students about potential difficulties, they are less likely to become discouraged and more likely to achieve their goals.

Research Gap and Research Questions

While the existing literature provides valuable insights into the potential of TikTok in English practice, there is a need for more focused research on the perceptions and experiences of Vietnamese college students in utilizing the platform for independent English-speaking practice. By addressing these gaps, this study aims to contribute to understanding how TikTok Duet can be effectively integrated into English language education, particularly for independent speaking practice in non-major learners. The purpose of the study could be achieved by answering two research questions:

1. What are the perceived advantages of using TikTok Duet for independent English-speaking practice among Vietnamese college students?
2. What challenges do Vietnamese college students face when using TikTok Duet for independent English-speaking practice?

Methods

Pedagogical Setting & Participants

Participants were students at the elementary level at a private college in Vietnam, including 9 interviewees. These are students that I taught General English to in the summer semester of 2024. The learning objective for these English sessions is to reach the A2 level on the CEFR. In the General English course, speaking skills are taught along with other skills (reading, listening, writing), vocabulary, and grammar, but are more focused. Students have to take an oral test (including a presentation and Q&A interview) at the end of the course. The students' language levels are around A1 on the CEFR, with only some students at A2 in the class. The course is around 5 weeks long. As a course requirement, students are required to prepare for 4 topics for the oral test. The questions in 4 topics are asked randomly in the oral test. During the course, students are introduced to the supplementary Duet videos on TikTok according to the 4 main topics of the course to help them better prepare for the final oral test.

Design of the Study

To address the research questions, the researchers used a mixed-methods approach that combined questionnaires and interviews to enhance the accuracy of data collection.

Data Collection & Analysis

The interview was used to clarify and gain insights about students' perspectives, challenges, and solutions regarding duets on TikTok. Eleven questions in the focused group interview were divided based on two research questions. Specifically, the first four interview questions outlined the students' perspectives and habits regarding TikTok duets. Then, students were required to describe some of the challenges and difficulties they encountered when using TikTok for duets in the next five questions. For the last two questions, they were asked to provide some solutions and their ideas on how to implement the TikTok Duet feature better in the future. Through purposive sampling, nine students were selected for the focused group interview (they are from two classes I taught). Selection criteria focused on diversity, including the following factors: gender, to explore different perspectives between boys and girls; language proficiency, to examine how different speaking levels affect their perspectives of TikTok Duet; class participation, to ensure balanced viewpoints of active and quieter students. The goal was to select the most diverse group to collect a range of information about students' perspectives and experiences using TikTok duets to improve their English. Students were given the opportunity to speak in Vietnamese to make it easier for them to express their ideas and thoughts.

Findings and Discussion

Perceived Advantages of Using TikTok Duet for Independent English Speaking Practice

The data highlighted that TikTok Duet helps non-major students at the college improve their pronunciation, fluency, confidence, listening skills, vocabulary, and grammar.

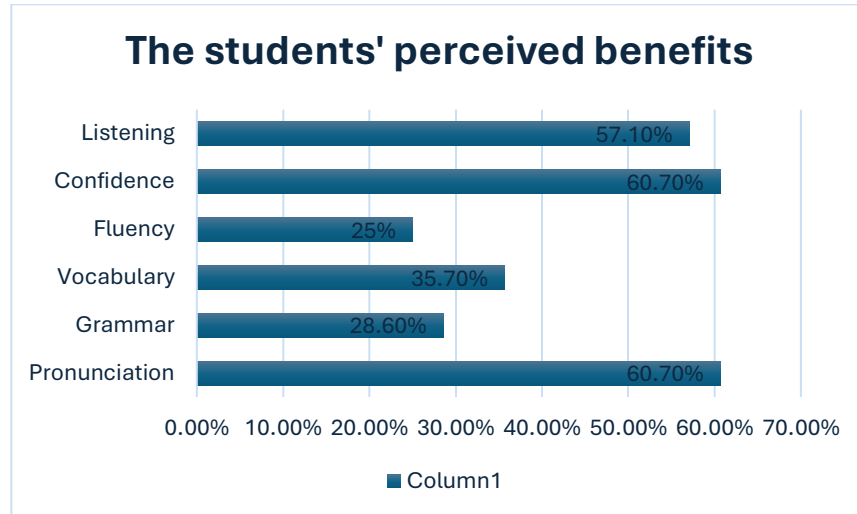


Figure 2: The students' perceived benefits

Pronunciation, Fluency and Confidence

The chart demonstrates the benefits of using TikTok Duet when practicing English. According to the chart, around 61% of the students improved their pronunciation and confidence, while 25% improved confidence. This finding can also be seen in the interviews when students reported their improvements in fluency and pronunciation by allowing them to imitate their teachers' pronunciation and practice repeatedly. For example, student 1 said: "When the teacher speaks or pronounces something, and we repeat it, it will be more accurate because we are listening to the correct pronunciation model." student 3 added: "Teachers read at a slow and moderate pace. I've noticed that even my classmates who haven't studied much yet can learn from those Duet videos, making it easier for them to understand the lessons." Notably, nearly 60% of students (Figure 2) claimed that their listening skills were enhanced because of the speakers' moderate speed and clear enunciation.

In terms of fluency and confidence, student 1 commented: "After listening and practicing, I feel more confident to speak English, and I speak more fluently." Similarly, one student shared: "Also, I feel more confident when I'm facing the camera on my phone. It kind of reduces the fear of speaking in front of a camera. I believe that it could help me become more proficient at making TikTok videos in the future."

This positive outcome can be attributed to duet videos on TikTok made by Vietnamese English lecturers at the college. The videos provided clear and familiar pronunciation models that were easily understood by the students, contributing to their learning and confidence. The studies by Rahmawati et al. (2023) and Karya et al. (2022) also support this finding (TikTok had a positive influence on students' fluency and confidence).

Grammar and Vocabulary

The chart shows moderate improvement over grammatical forms and vocabulary. Around 35% of respondents believed their vocabulary and grammar increased after dueting the challenge on TikTok. Similarly, the figure for grammar was approximately 29%. For example, one student mentioned: “As for grammar and vocabulary, I think it helps me know more about the correct structure. Even though the teacher provides grammar structures, I don't feel I've improved much because I still struggle to put simple grammar into longer sentences. Comparing this to other methods, I'm not sure it helps as much with grammar.” This can be explained as the content of the duet video is supported by the teachers' model answers and suggested vocabulary and sentence structures after each question. Such benefits are confirmed in previous research (Iswahyuni, 2021), where the usage of TikTok enhanced speaking skills including grammatical patterns and vocabulary.

Overall, the findings suggest that TikTok Duet greatly improves students' pronunciation, fluency, and confidence in their English speaking skills.

Challenges of Using TikTok Duet for Independent English Speaking Practice

It can be seen that technical issues (61%), lack of confidence (around 43%), time constraints (29%), and fear of privacy (21%) are the challenges faced by the students while dueting on TikTok.

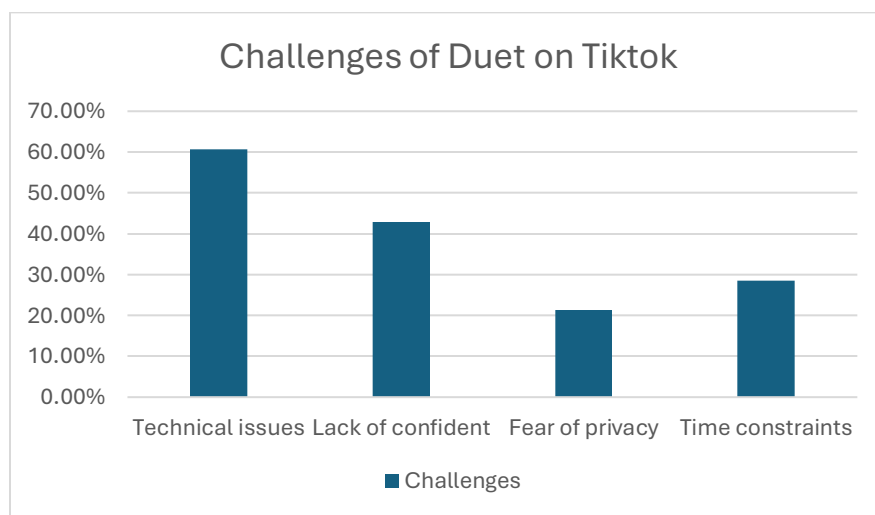


Figure 3: Challenges of using duet on Tiktok

Technical issues

According to the chart (figure 4), all of them encounter technical issues, but the frequency of these difficulties is different. Nearly one-third of students commented that technical issues happened, while more than half of them encountered those issues. In the interview, some students complained that the video could take a long time to load, and there was frequent lagging, depending on the length of the videos and the internet speed. The students also revealed that the sound was out of sync with their speech and that the sound echoed if they didn't wear earphones with a mic.

This finding aligns with the research conducted by Hamsia (2024), which found maintaining time, flow, and audio synchronization challenging. To encounter these challenges, the guideline for the duet should clearly demonstrate potential problems and suggest solutions to avoid students'

frustration in dealing with the frequent issues. Plan B should be suggested in case of technical failures. For example, students can watch the video on a device (laptop) and record the video with a front camera to answer the questions without using the duet feature on TikTok.

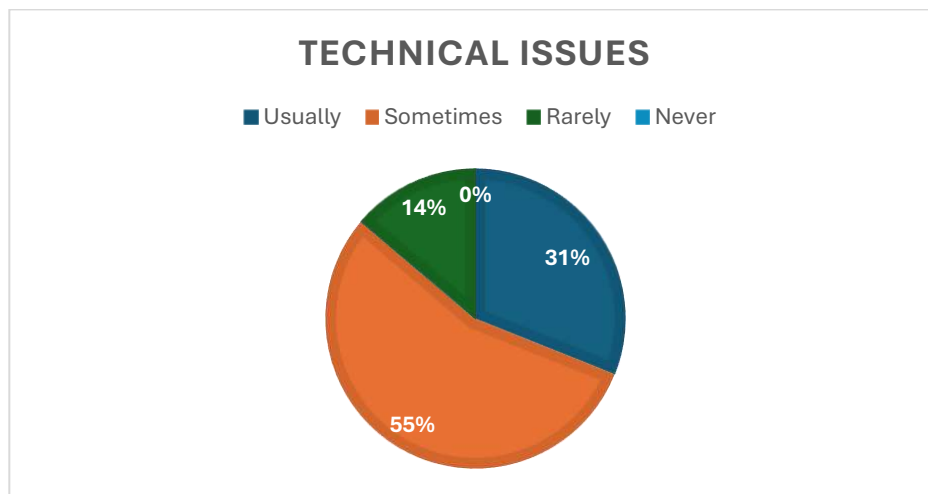


Figure 4: Technical issues

Privacy Concerns

Most of the students have privacy concerns and the fear of peer judgment, especially for students who were reluctant to post their duet videos in public mode. This was reflected in a student's statement, "I'm also concerned, teacher, because my pronunciation isn't very good. So, I limit who can view my videos, like family and close friends." Most of the students, when interviewed, shared that they were willing to share their videos if their pronunciation was perfect. However, some felt less embarrassed and were familiar with it after the first time. Some shared their duet videos, downloaded them, submitted them on Padlet, and then deleted them immediately.

Student 5 shared: "At first, I did have concerns. I recorded my videos and kept them private because I wasn't used to it and felt shy about sharing them."

Other Challenges

Some students encountered challenges with the response time limitation, as student 5 pointed out: "One challenge I face is when the waiting times given by the teachers are too short. If I have a longer answer, I find that my response doesn't match the time well. If my answer is lengthy, I often end up simplifying it. For example, instead of saying, 'I would do this because of this reason,' I might just respond with, 'I would do this,' without expanding on my answer further. In hindsight, this should be calculated carefully when planning the content of the videos. On the other hand, the students in this study have not mentioned the additive features of TikTok compared to the research by Nurwinda & Ambarwati, 2024, where participants identified that TikTok's algorithm and its addictive nature pose significant challenges in using the platform.

In summary, despite valuable opportunities for language practice with TikTok Duet, students encounter significant challenges, including technical issues, privacy concerns, and time constraints. These challenges must be addressed to improve their overall experience.

Duet TikTok as Independent Speaking Practice

According to the chart (Figure 4), only 7% of students practice their English duet every day, and nearly 60% of the respondents completed 4 duet videos. It is clear that many students require external motivation and support to engage consistently with this practice. Therefore, it is suggested that teachers incorporate dueting videos on TikTok into lesson plans or assignments to increase motivation for their students. Another notable finding is the influence of time constraints on their ability to practice independently. Nearly 30% of the survey respondents admitted that their busy schedules, including the amount of assignments from courses as well as part-time job commitments, affected their practice. When asked about the after-duet challenge in the course, most of them shared that they did not develop the habit of dueting independently; only one did. In conclusion, to promote consistent engagement with TikTok Duet as a tool for independent speaking practice, teachers should offer guidance on time management, incorporate these duet activities into their curriculum, and encourage students to develop self-directed learning strategies such as by setting specific goals or reflecting on their progress. This can enhance their intrinsic motivation and promote consistent duet practice.

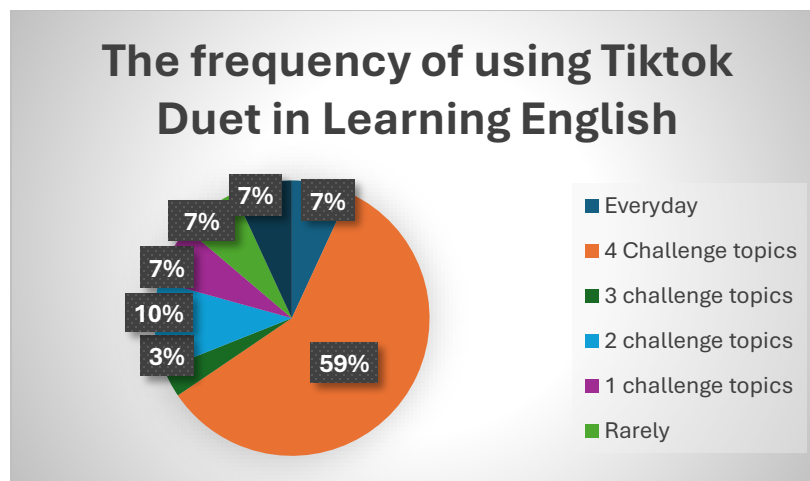


Figure 4: The frequency of using Tiktok Duet in Learning English

Conclusion

Based on the survey and interview results, most students have improved their English speaking skills, particularly in pronunciation, fluency, and confidence. Although grammar and vocabulary improvements were also recognized, the results were less pronounced in these areas. However, the article also pointed out some major challenges, including technical issues, privacy concerns, and response time limitations. Most students encountered challenges with video lag, sound synchronization, and internet connectivity issues. Privacy concerns also made some hesitant to share their videos publicly, although a few were able to overcome their initial reluctance. Furthermore, students emphasized the need for additional time and external motivation to practice independently beyond the structured duet challenges.

Overall, this finding indicates that TikTok Duet can serve as an effective tool for supplementary speaking practice outside the traditional classroom. However, it is challenging to consider it a

standalone method for independent practice, as the duet videos heavily depend on teachers (creators) to provide structured models and content. To encourage broader adoption and enhance the sustainability of TikTok Duet as a tool for improving English-speaking skills, it will be essential to address the identified challenges, particularly those related to technical and privacy issues. Future research could investigate potential solutions to these challenges and assess the long-term impact of using TikTok Duet on students' speaking skills.

It is important to acknowledge the limitations of this study. Due to time constraints and limited resources, it was impossible to survey every student, which may affect the generalizability of the findings. Furthermore, this research primarily concentrated on customized TikTok Duet videos structured sentence models tailored for lower-level students. These types of duet videos are less popular than the more commonly used ones, where users simply repeat the same sentence. With additional time, the research could have included a larger sample size and potentially revealed broader insights. Addressing the identified challenges, particularly those related to technical issues and privacy concerns, is crucial for fostering wider adoption and ensuring that TikTok Duet becomes a more sustainable tool for enhancing English-speaking skills. Future research could investigate solutions to these challenges and assess the long-term impact of TikTok Duet on students' speaking abilities.

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Biodata

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An Investigation into Third-Year Students' Perceptions of the First English Teaching Practice

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ABSTRACT

Keywords:

perceptions, teaching practice, satisfaction

Research into language teaching methodology involves a dynamic interplay between teacher-led activities and learner engagement to acquire knowledge, skills, and critical thinking abilities. Even so, more research has been done to explore students' unique challenges during their initial teaching practice sessions. This study addresses this gap by looking into the perceptions of junior English majors while taking their first teaching practice in language teaching methodology classes. The study aims to pinpoint these issues and provide workable fixes to improve instruction. Quantitative and qualitative methodologies, such as close-ended and open-ended questionnaires, were used to collect data from 150 junior English students. The results show that students face difficulties resulting from internal and external sources during class. The study provides valuable insight to support the teacher trainee and practical improvement for the development of the course Language Teaching Methodology.

Introduction

Teaching English is an important concern for educators, teachers, and parents worldwide (Nguyen & Nguyen, 2024). "Teaching practice" is one of the many demanding training processes that teacher candidates must go through to become highly trained and self-assured educators. Regardless of how long it lasts, Kabilan and Izzaham (2008) claim that teaching practice is an excellent approach for aspiring teachers to experiment and assess their expertise. Similar to this, Riesky (2013) believes that during the teaching practice phase, student-teachers will be able to apply the knowledge they have gained from the academic curriculum to real-world teaching circumstances. Teaching practice is crucial for trainees since it gives them the chance to hone their skills. Putting information into practice during a teaching practicum is not always simple. (Riesky, 2013). At the Industrial University of Ho Chi Minh City, Language Teaching Methodology 1 is a specialized subject for 3rd-year students in the foreign language department. Students have to do some teaching practice in this subject, and this phase can be considered their first teaching experience. During this learning process, the students have encountered difficulties that will greatly affect themselves and their performance in class. Thus,

identifying the challenges these teacher trainees face in their teaching practice and providing solutions is crucial since it can help reduce the problem and their anxiety. Following this, the current study aims to discover the reason for difficulties in planning and organizing experimental teaching in front of classes of the foreign language teaching methods of 3rd-year students at the University of Ho Chi Minh City and propose suitable solutions for the problems.

Literature review

Definition of teaching practice

Gebhard (2009) defines 'teaching practice' as a variety of forms such as "practice teaching, field experience, apprenticeship, practical experience, and internship". This activity aims to provide opportunities for student teachers to practice and improve their teaching by applying their knowledge to gain more practical experience in academic settings. Riesky (2013) also adds that one of the crucial steps for student teachers is the teaching practicum, which gives them the opportunity to put what they have learned in the classroom into practice. The author's statement clearly defines teaching practice as providing teachers with real teaching situations in which they can apply what they have learned to practice. Regardless of its length or duration, pre-service teachers have a wonderful chance to test their knowledge and skills in a real teaching and learning environment. They can also use this experience to better understand their personal and educational theories and philosophies. This showed that "Teaching practice" is not only a part of the education curriculum but is also an important opportunity for teachers involved in teaching in a real academic setting.

Review previous studies

Ong et al. (2004) studied trainee teachers' perceptions of the school teaching practice, emphasizing the importance of collaboration between teacher training institutions and schools. Mixed methods were used in this study, utilizing the close-ended and open-ended questionnaire with 44 Malaysian trainee teachers. A key contribution of this study was its identification of the factors that influence trainee teachers' awareness and the nature of these factors. The study's results also highlighted the necessity for trainee teachers to continually develop themselves to adapt to the educational environment to meet the demands of 21st-century teaching. The study also suggested the complex relationship of various factors that can support or hinder the effectiveness of new teachers' teaching practices.

Kabilan and Izzaham (2008) did a case study to investigate the challenges faced by student teachers during their teaching practice. The study focused on the strategies employed to overcome the difficulties faced by a single participant, Ms. Aida, a 24-year-old Malay teacher, during her three-month internship at a secondary school. Data was collected by means of reflective reports and interviews with the participants. Research findings revealed that the participants faced three primary challenges: managing a mixed-ability class, dealing with the use of the mother tongue in the classroom, and navigating expectations of teacher-centered instruction. This study has provided insights into the challenges encountered. However, the limited number of participants made it hard to draw general conclusions.

Following the theme, Goh and Matthews (2011) conducted a study to identify the causes of Malaysian student teachers' concerns before and after their teaching practice. The study involved 14 female students from Sultan Idris Education University, and data were collected through interviews and reports. The researchers found that classroom management was the main concern for the participants, who often struggled to distinguish between poor classroom

management and a lack of student discipline. The participants also demonstrated emotional concerns regarding the images they perceived by the students and other teachers. The research finding also indicated that the student teachers were worried about the methods and the content of the lesson, as well as the classroom environment.

Another study by Riesky in 2013 was conducted to discover trainee teachers' difficulties when teaching in secondary schools in Bandung, Indonesia, and their solutions to overcome these challenges. These 14 participants were paired and observed for 4 months for data collection. Research findings showed that these participants faced challenges related to their students, themselves, and other teachers. In order to overcome these problems, the trainee teachers tried to implement many teaching approaches, establish connections with the students, and enhance their teaching methodology. The study highlighted the importance of getting support and flexibility in teaching to get through the difficulties encountered.

Ledy Mardiah (2020) explored the challenges that student teachers encounter while they are practicing teaching English to speakers of other languages. The qualitative study involved 5 participants from IAIN Batusankar. Purposive sampling was employed. Interviews with the participants revealed that class management, lesson planning, feeling inexperienced in the classroom, implementation of language teaching methods, using Media and technology, creating teaching aids, and dealing with students' different characteristics were the main challenges that the participants had faced.

Many studies have been done to investigate the challenges associated with teaching practicums across various international contexts; however, most of them have been conducted in foreign countries with participants from a range of locations. Thus, they do not specifically address the context of Vietnam, especially concerning the "Language Teaching Methodology 1 (LTM 1)" course, the first language teaching methodology the students attend. Therefore, this study aims to fill this gap by focusing on students' experiences in Vietnam during their LTM 1 teaching practice.

Research Questions

This research is going to answer the following questions:

1. How do students in the Faculty of Foreign Languages at a university in Ho Chi Minh City feel when planning and organizing experimental teaching sessions for a language teaching methods course?
2. What are the difficulties of planning and organizing a lesson for these students?

Methods

Pedagogical Setting & Participants

The study focuses on English major students at the FFL in a Ho Chi Minh City university. One hundred fifty third-year students specializing in English from four Foreign Language Teaching Method 1 classes were invited to participate in the survey. At the Faculty of Foreign Languages, students who majored in English have to study 3 obligatory courses in language teaching. They are Theory of Language Teaching, Foreign Language Teaching Method 1, and Foreign Language Teaching Method 1. These selected students all studied this subject and had previous teaching practice, thus deeply understanding the planning process, classroom organization, and the difficulties encountered in practical teaching. Participants are required to share their thoughts and challenges during the practical teaching process. This is crucial in collecting the

necessary data for this research.

Design of the Study

The quantitative and qualitative methodology are the focus of this study. The mixed methods research approach combines various methods by collecting, analyzing, and mixing quantitative and qualitative data in a single study or series of studies (Cohen, L., Manion, L., & Morrison, K., 2017). Creswell and Plano Clark (2011) suggest that a mixed methods approach can help explore and explain the processes at work in a phenomenon and the different perspectives on the phenomenon, thereby increasing the usefulness and credibility of the results found, and after that the opportunity for unexpected results will be found. In order to find out the thoughts of the participants, a combination of close-ended and open-ended questionnaires is used to gather data.

The questionnaire consists of two parts:

- Part I: General information
- Part II: A list of 20 questions which are divided into 3 groups of open-ended questions to collect quantitative data from 150 students:
 - Group 1 (questions 3-8) is aiming at gathering insights into students' perspectives and opinions.
 - Group 2 (questions 9-21) is designed for intending to find out the challenges faced by students teachers during teaching practice.
 - Group 3 (question 22) is a summarizing question related to the most challenging factor that the student faced.

Data collection & analysis

The data collection process spanned 14 days and included three main stages. First, the researchers identified study participants as third-year English major students enrolled in 'Language Teaching Methodology 1'.

In the second stage, private meetings were held from April 3rd to 5th, 2024, to design a questionnaire based on the research questions. The finalized questionnaire, consisting of 22 questions across two sections (General Information and Teaching Practice Challenges), was reviewed, revised, and printed for distribution.

In the third stage, the survey was conducted on April 6th, 2023, with the support of language department lecturers. Around 150 students from four classes participated, filling out the questionnaire during lecture breaks. Afterward, the researchers collected the data for analysis, expressing gratitude to the faculty and students for their cooperation.

After collecting 150 questionnaires, the researchers reviewed and summarized the students' thoughts and difficulties during the teaching practicum. Due to the open-ended nature of the responses, the data was initially challenging to analyze. To streamline this process, the researchers replicated the paper survey in Google Forms and manually entered all responses.

Once entered, the data was reviewed and exported to Microsoft Excel, where it was organized into charts for easier interpretation. Similar questions were grouped together, and appropriate charts were used to highlight key comparisons. The original paper questionnaires were kept to ensure the reliability of the results.

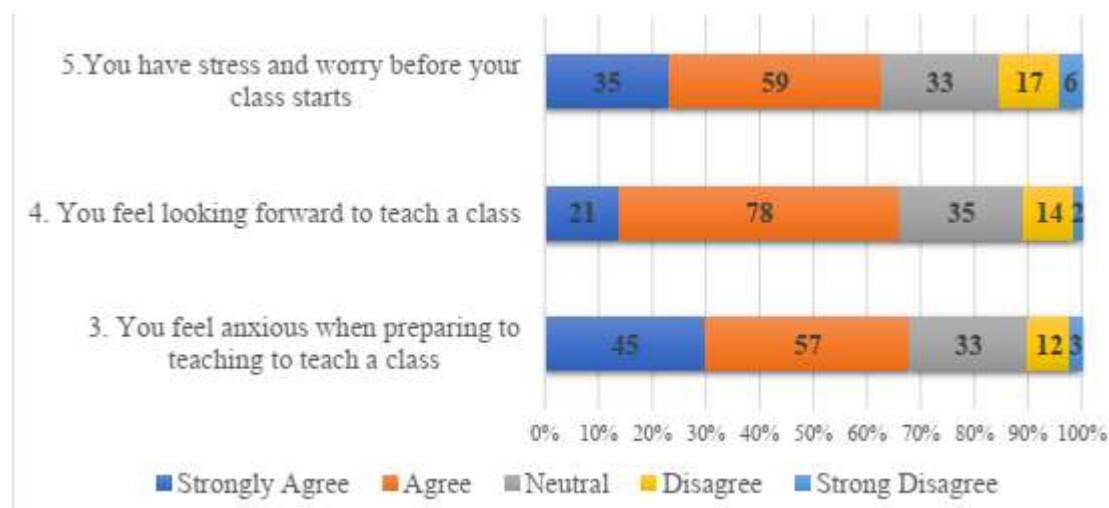
Results/Findings and discussion

This section will present the research results in two parts, namely the perspectives and the challenges during practice teaching in the course Foreign Language Teaching Method 1 (including internal factors and surrounding factors)

The feeling of the students when doing the teaching practice

Figure 1

The feeling of the students when doing the teaching practice



Most third-year students participating in the teaching practice for the first time have feelings of their own, as shown by the chart in Figure 1. Apart from the students, most people (66%) think there is a sense of excitement and anticipation for practicing teaching, but they also feel uncertain and uneasy when they first plan a lesson (68%). When this member teaches in class directly, they also cause tension and worry (62.6%). Third-year students may be learning Foreign Language Teaching Methods 1 for the first time, so they will likely be excited and looking forward to it. Additionally, students will experience anxiety and nervousness because this is a new subject. However, a few students still do not feel that way, so about 15% of 150 people disagree with this idea, and 23% of students choose neutral.

Figure 2

The percentage of 3rd-year students satisfied with teaching practice

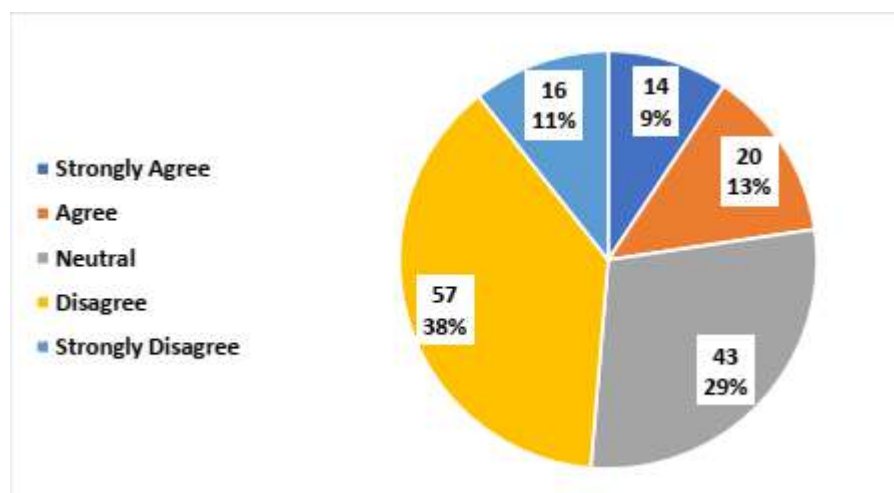


Figure 2 illustrates the level of student satisfaction with their teaching after the completion of the teaching practice session. The results are rather unexpected because over half of the students who responded to the poll (49%) said they were dissatisfied with the instruction they received, suggesting that their lectures were not well-received and that they might have done a better job. About 29% of students gave indifferent answers. On the other hand, 22% of students said they were happy with the results, demonstrating that they worked hard and thought their efforts were worthwhile. Overall, there are twice as many students who are unsatisfied as there are who are satisfied. This implies that some students are unhappy with the outcomes they obtained from their classes.

The difficulties of planning and organizing a lesson for these students

Figure 3

Difficulties in preparing the teaching materials

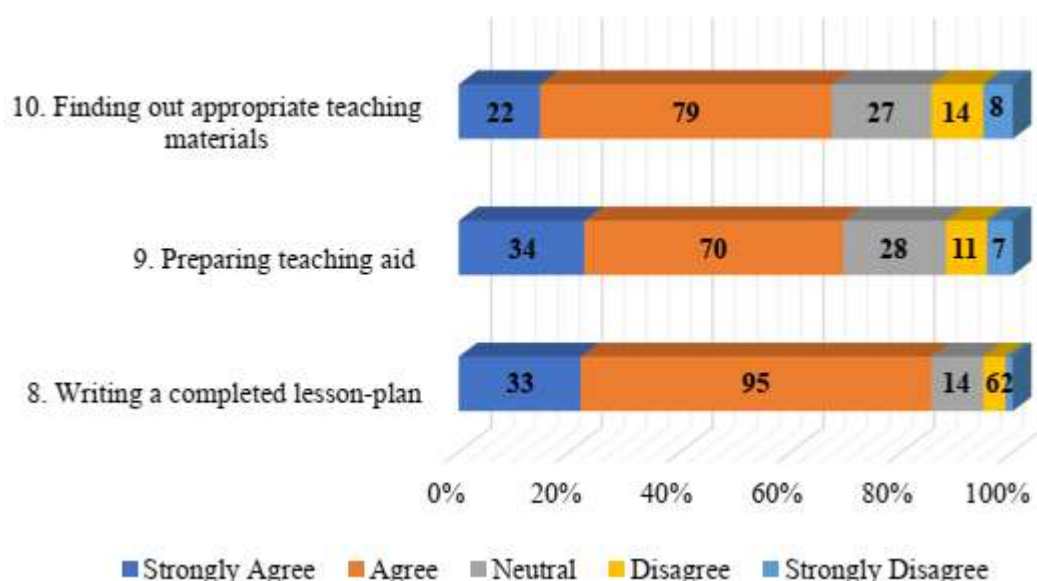


Figure 3's survey findings illustrate students' three main difficulties when looking for instructional materials for the "LTM 1" course.

1. Writing a completed lesson plan

A significant 85% of students, totaling 128 individuals, indicated difficulties in developing a thorough lesson plan, highlighting a widespread challenge in formulating effective processes and materials. Only 14 students, representing 9%, remained neutral on the matter, while 9 students, or 6%, voiced their disagreement.

2. Preparing Teaching Aids

Preparing appropriate teaching aids was difficult for 70% of students (104), with 18% (27 students) feeling neutral and 12% (18 students) disagreeing. These results point to a noteworthy but less widespread problem.

3. Finding Appropriate Teaching Resources

There was some variation in the experiences of the students, as 67% (101 students) found it difficult to get reliable and pertinent instructional resources, while 18% (27 students) were neutral and 15% (22 students) disagreed. Ultimately, the hardest part of the job was coming up with a thorough lesson plan, followed by making teaching aids and locating relevant materials.

The results are in accordance with previous studies by Ledy Mardiah (2020) and Aisyah (2017) since the participants also admitted difficulty in writing lesson plans and preparing teaching aids. Moreover, because there are too many sources to refer to, students and teachers can lose their orientation in selecting materials, causing unnecessary obstacles.

Figure 4

Challenges relating to the skills that students face during teaching practice

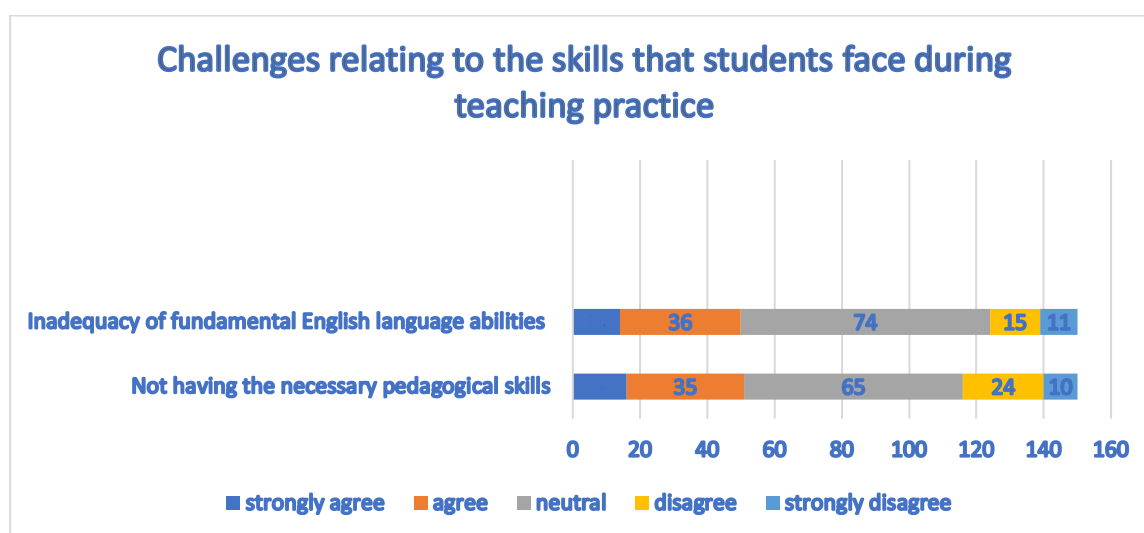


Figure 4 discusses the challenges relating to students' skills during teaching practice. The figures showed that there was no statistically significant difference between the two bars, with the biggest percentage of students responding neutrally to both problems. For Bar 1, about 49% of students (74 students) offered a neutral response, while for Bar 2, about 43% of students (65 students) gave a neutral response. The next commonality between the two bars was that they had roughly the same percentage of agreement (33% for Bar 1 and 34% for Bar 2). In contrast, 17% of students (26 students) for Bar 1 dispute that they faced skill-related difficulties throughout their teaching practice. Meanwhile, 17% (26 students) of Bar 1 and 22% (34 students) of Bar 2 students disagree that they faced skill-related difficulties during their teaching practice. All things considered, these statistics indicate that most students do not encounter severe difficulties with regard to skill-related problems when they are teaching.

Other difficulties mentioned by the participants include a lack of confidence and physical problems. The majority of students (64%) agreed that they lack confidence when teaching in front of many people. Meanwhile, approximately 22% (32 students) provided neutral responses, and a few students (14%) disagreed that they lacked more confidence during the teaching process. Furthermore, a small percentage of students (18%) concurred that they experienced some unintended health problems. That being said, this is a negligible amount. In general, most students concurred that they do not encounter many substantial physical obstacles when they are instructing.

Suggested Solutions

A number of suggestions are possible to deal with the challenges noted in the research. To overcome the feeling that novice teachers have to face in their initial teaching, guidance on controlling their emotions should be provided before the training. Diverse strategies can be employed to manage the feelings, including redirecting attention, modifying pedagogical

approaches, and reassessing feelings (Ngo, 2024). Ali Bin-Hady and Abdulsafi (2018) recommended some ideas to help trainees improve their writing lessons. They suggested that EFL teachers notice 1) Reading the lesson notes and materials and listening to the Cassette section and 2) Thinking about whether the suggested course of action will accomplish this goal. If required, adjust the process to meet your student's unique requirements. 3) Consider challenges that your students may meet and choose the most effective presentation method for the materials to address them. You can write the question or provide some examples in the lesson plan. 4) Calculate the duration of each lesson part and prepare the homework as soon as possible 5) Make sure there is enough time in your schedule for student-to-student interaction 6) Ensure that the class includes a wide range of activities; it should include a short teacher-led introduction, pupil activities, short teacher-led conclusion. On the other hand, Nurfirtri, Regina, and Yulian R. (2020) suggested dividing the process of writing lesson plans into 3 main stages, including pre-design, whilst-design, and post-design. In each stage, the author mentions factors that teachers should pay attention to in the writing process; for example, in the design phase before lesson plans, teachers should pay attention to "unique, different, and full of planting attitudes, knowledge, values, and character of students". Finally, he suggested that teachers "manage the time" and "make their own lesson plans" because it is necessary in the teaching process.

Conclusion

The study aimed to identify the challenges faced by third-year English majors and provide solutions to help them get past those challenges. Findings for the first research question indicate that most students experience anxiety before class begins and have a sense of unease as they prepare for the session. The students' difficulties have been caused by internal variables (lack of confidence, deficiency in fundamental English abilities, creation of instructional materials, creation of insufficient lesson plans, etc.). It is advised to put in place thorough training programs that emphasize improving students' capacity for lesson planning and offering sufficient teaching assistance in order to mitigate these difficulties.

To help the research have more diverse information and more perceptive perspectives, it is advised to conduct more interviews with experienced teachers and to employ group interviews with students. Future research should look at developing an understanding of data problems. From there, we may find more practical ways to support and overcome challenging issues in our practice as teachers.

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The Use of Electronic Mind Maps to Develop EFL Students' Vocabulary

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ABSTRACT

Keywords: mind map, vocabulary, vocabulary knowledge scale, autonomous learning

These days, the advancement of technology allows mind map creation on mobile apps or online platforms, which saves time and creates enjoyment for users. Literature indicates that electronic mind maps positively affect second language learning in different aspects. With the use of Coggle – an online mind map creator, this study aimed to explore the influence of electronic mind maps on the English vocabulary of EFL students. Thirty-six students of non-English majors participated in this one-group pretest-post-test design pre-experimental research, which lasted ten weeks. The data collected from pre-test, post-test, and questionnaire were analyzed quantitatively by SPSS. The results revealed that electronic mind maps significantly increased the students' vocabulary and developed their autonomous learning. It is suggested that electronic mind maps should be used more in the future to help EFL learners develop their language skills.

Introduction

Because of vocabulary shortages, language learners can face numerous difficulties communicating in target languages. Very little information can be conveyed with no grammar, but no information can be conveyed with no vocabulary. The traditional methods of learning vocabulary, such as remembering long lines of new words, were revealed to be ineffective and boring. Therefore, new approaches to teaching and learning vocabulary are introduced to increase the effectiveness of vocabulary acquisition. One of the methods that is gaining attention is mind mapping, which helps develop the brain's memory through text and graphics (Wu & Zheng, 2023). When learning English, it is essential to have a solid vocabulary knowledge of the meanings and the use of words in different contexts. Studies indicate that using mind maps helps increase English learners' vocabulary knowledge and recommend using mind maps more in both in and out-of-class activities (Al Shdaifat et al., 2019; Kord et al., 2022).

Thai Nguyen University of Education is a northern part of Vietnam university responsible for educating pre-service teachers in all subjects. English is considered one of the indispensable skills of 21st-century teachers and has received a wealth of attention from the University's

lecturers and managers. However, the level of English proficiency of students is relatively low. One of the reasons for students' low English level is that they possess very little vocabulary. Regular vocabulary tasks, additional e-learning instructions from lecturers, and frequent formative assessments are not effective enough to help students gain much of the required vocabulary. Finding a learning method to help students increase their knowledge of English vocabulary is crucial. It is the foundation for developing other English skills and helps students reach the required English level of 21st-century teachers.

The advancement of technology allows free access to mind map creators, which have proven to be easy to use and help save much time (Alba, 2020). Studies also indicate that using mind maps and electronic mind maps helps increase vocabulary recall and retention (Al Shdaifat et al., 2019; Kord, 2022; Duyen, 2020). It can be seen from the literature that little research investigates the effects of electronic mind maps on different aspects of vocabulary, which is not only the meaning of words. In addition, Alba (2022) concluded that electronic mind maps helped improve students' autonomy; he suggested more studies should be conducted to examine the influence of electronic mind maps on students' autonomy at different levels.

This study aims to determine if using Electronic mind maps helps increase the vocabulary knowledge of students at Thai Nguyen University of Education and examine the influence of using electronic mind maps on students' autonomous learning.

The study's findings could contribute to the existing research gaps and suggest an effective method of teaching vocabulary to English lecturers and students at Thai Nguyen University of Education and other English teachers and learners.

Literature review

Vocabulary

The most popular vocabulary knowledge includes productive and receptive; productive refers to the vocabulary used in speaking and writing, and receptive refers to understanding the meaning and form of words in reading and listening (Al Shdaifat, 2019). The research of receptive and productive knowledge must be in conjunction with other dimensions of vocabulary to fully evaluate the learner's comprehension of target words. Henriksen (1999) introduced three dimensions of vocabulary knowledge: partial-precise, depth of knowledge, and receptive-productive, which is accepted to match with different dimensions developed by other scholars (Zhong, 2011). The partial-precise dimension is the ability to translate a word into an individual's mother tongue; word cognition tasks can test this dimension; in this dimension, the learner might or may not know the word's meaning. The depth of knowledge is the inferential meanings and the relations to other words of a lexical item, including synonyms, antonyms, hyponymy, and collocations. The third dimension is receptive-productive, which is the "ability to use words in comprehension and production" (Henriksen, 1999, p.307).

In order to assess the vocabulary knowledge of learners, some tools have been developed to cover all the dimensions of words. The Vocabulary Recognition Task is developed to evaluate content areas that combine self-reported and performed knowledge; this assessment can test the knowledge of related words and the ability to read and divide words into topics. Vocabulary Assessment Magazine specializes in measuring students' understanding of science texts; this assessment has two main aims. The first one, with open-ended questions, tests students' ability to summarise, make questions, and use the text to illustrate knowledge, and the second one tests the science knowledge ranges. The Vocabulary Knowledge Scale is a self-report assessment

with formatted answers indicating the learners' knowledge of each word. The scoring is designed into five categories, including the learner has seen the word or not, the learner has seen the word but does not know the meaning, the learner has seen the word but is not sure about the meaning, the learner knows the word, and the last level is the learner can use the word in sentences (Dougherty Stahl, 2010). The Vocabulary Knowledge Scale aims to record the knowledge of new words from reading texts in a short time through 5-scale indicators, which are large enough to present the vocabulary acquisition but small enough to show the changes in the knowledge during the limited time of instruction (Anthony, 2009).

Regarding the ability to evaluate the three dimensions of the scale, it could be seen that the Vocabulary Knowledge Scale is more suitable to test the dimensions, specifically the partial-precise is evaluated by the recognition of a word (having seen the word before), and the recognition of a word without knowing the meaning (having seen the word before but not knowing the meaning). The translation and synonyms of the word test the depth of knowledge. The receptive-productive knowledge is examined by the ability to use words in sentences. However, the sense of depth in the three dimensions of vocabulary is larger than the indicators of the scale (Henriksen, 1999). Therefore, in this study, in addition to the translation and vocabulary, the depth is also examined by antonyms, hyponymy, and collocations of words.

Mind maps

The mind map was first introduced in the 1970s and was a combination of words, images, and colors presented in a graphic manner (Luangkrajang, 2022). In latter definitions, the description and function of mind maps are more precisely defined as they are the diagrams that present the connection of ideas or information (presented as branches) to a topic or keyword (in the center) by connecting lines; different pictures, colors, and shapes are used to highlight the main thoughts and facts (Luangkrajang, 2022; Al Shdaifat et al., 2019; Meirbekov, 2022).

Mind maps can be used in education for different purposes, such as organizing information, planning thoughts, brainstorming ideas, and reviewing the whole content of a topic (Luangkrajang, 2022). Mind maps promote students' prior knowledge and organize vocabulary in foreign language instruction. Before introducing new words, it is essential to repeat the learned words because a large amount of information received every day may cause the forgetting of learned words (Meirbekov, 2022). Mind maps can link the learners' previous and new vocabulary. Mind maps' visual, organizational, and radial traits enable them to function as memory tools for vocabulary learning. In addition, the visuality of mind maps can balance the brain's work and facilitate the link between old and new information, maximizing vocabulary memory (Duyen, 2020). Besides the facilitation of memory, mind maps can meet the requirements of all types of learners. Three types of learners are determined as the target audience in every classroom. Learners learn in their best way when they see materials, learners who learn when they listen, and learners who learn by moving or using their hands. Mind maps match visual and kinetic learners when they can convert texts to visual depictions by drawing and writing.

Several studies on using mind maps in vocabulary learning (Sari et al., 2023) concluded that mind mapping is a powerful tool to motivate English vocabulary learning. Mind maps have also proved to be effective in developing the vocabulary recall and retention of English as a second language students in a study conducted by (Feng et al., 2023). Meirbekov's (2022) paper confirmed the effectiveness of mind maps in developing students' English vocabulary and increasing their creativity and motivation.

Different structures and types of mind maps can be used for specific purposes. Wu & Zheng

(2023) introduced three types of mind maps for vocabulary learning: situational maps, synonyms/antonyms maps, and roots and affix maps. Situational maps allow the creation of an overview of words related to a specific context or topic. Synonyms/antonyms maps can compare and distinguish words. Root and affix maps help to see the components and origins of words. He concluded that combining three types of maps promotes long-term and short-term memory.

Electronic mind maps

Mind maps are paper-based, and using pens and colors creates a connection between ideas. Recently, the advancement of technology allowed the introduction of mind-mapping software and websites, which can transform the classroom into a cheerful learning environment and save much time (Feng et al., 2023; Al Shdaifat, 2019). Electronic mind maps have proven to be effective in improving the learning outcomes of learners in the process of learning vocabulary and surpassing hand-written mind maps in certain aspects. Al Shdaifat (2019) had a study investigating the influence of electronic mind maps on students' English vocabulary and found that the use of electronic mind maps is easier, faster, and more attractive to students; in addition, students revealed to improve vocabulary in four sub-skills which are, generalization (the ability to define words), application (the ability to select a suitable use of words), breadth (the knowledge of multiple meanings and synonyms of words), and precision (the ability to use a word correctly in contexts). Kord et al. (2022) confirmed electronic mind maps' effectiveness in activating students' ability to define words.

In modern education, teachers must adapt software that meets their teaching objectives and select the suitable tool to bring students interest and motivation (Al Shdaifat, 2019; Tu, 2022; Vu, 2022). Although studies indicated the effectiveness of using electronic mind maps in vocabulary learning, little research suggested specific electronic mindmap-creating tools for vocabulary education. This study examines the use of Coggle, an online platform specializing in creating mind maps, to evaluate its effectiveness in vocabulary acquisition.

Coggle is one of the first websites to allow graphic communication through mind maps (Premchandran & Chalamayya, 2024). With its ease of use, this website can promote easy and free access for users regardless of time and location; users can create their mind maps or use the available mind maps in the gallery (Arulchelvan, 2019). Users can easily add branches of the core concept by clicking on the 'add' symbol. The users can choose the map colour and add links, images, and icons to make the maps of their style. The website allows users to share maps with other users by sending invitations through email; therefore, many users can work on the same map simultaneously. The website allows the use and presentation of files online or by downloading them as files. Besides the convenience and ease of use, Coggle has improved the critical reading and thinking of learners who study English for specific purposes (Khatib & Zaidoune, 2024).

Autonomous learning

In a study on mind map software and learning vocabulary, Alba (2022) suggested that applying mind mapping software can build up autonomy for learners in making their mind maps. Sa'adah and Wahyuningsih (2024) also confirmed that mind maps can promote autonomous learning. Autonomous learning can be divided into three aspects, including cognitive which is achieved by the process of reading, note-taking, and remembering; metacognitive can be mastered through the collection of data, self-supervision, planning the learning, evaluation of the learning process, arranging learning materials; social mediation is demonstrated through relaxed behavior in learning, forming rules in group work, cooperating with other students,

communicating effectively, and helping other students to evaluate their work. Students who learn autonomously do not ignore the role of classroom learning; they consider the classroom and lecturers to be supportive sources of their autonomous learning (Zulaihah & Harida, 2017).

Research Questions

In order to fulfill the purposes of the study, the research questions are listed as follows:

1. To what extent does using electronic mind maps influence students' vocabulary knowledge at Thai Nguyen University of Education?
2. How does using electronic mind maps affect students' autonomous learning at Thai Nguyen University of Education?

From the research questions, the hypotheses of the study are as follows:

H1: Electronic mind maps significantly increase Thai Nguyen University of Education students' vocabulary knowledge.

H2: Students had a high level of autonomous learning when using mind maps to learn English vocabulary.

Methods

Pedagogical Setting & Participants

The participants were 36 students from different Thai Nguyen University of Education majors, including 24 females and 12 males. They were joining the English 3 course, which is one of three compulsory English courses at the University. Their performance in the English 2 course (the pre-course of English 2) was low; all had a final score below 4.0.

Design of the Study

The mind maps were used in the course's reading section because vocabulary relates to reading (Al Shdaifat, 2019). The course book was Life A2-B1; in this course, students studied from units 9 to 12, which covered the topics of holidays, products, history, and nature. Before the reading lessons, the students were asked to draw their mind maps using Coggle at home. In this study, the mind maps for the vocabulary of Wu & Zheng (2023) were adapted to develop the maps for each topic; however, the participants were all non-English majors, so the roots and affix map is not used in this study because this type of map requiring a certain level of word knowledge to develop which is challenging for the participants of this study. Each week, students were asked to develop two mind maps. The first was a situational map, designed individually in Coggle; before the reading class, the teacher assigned the topic to students and encouraged them to link it with all the words they knew to create the mind map. The second one was a synonym/antonym map, a group work on Coggle; in addition to the synonyms and antonyms of words, the collocations and hyponymy were encouraged to be included in the maps. The synonym/antonym map was assigned as the homework, and students submitted it on Google Drive. The students were familiar with the types of mind maps they were required to develop and were instructed on how to use Coggle to draw maps in the first week of the study. Students were randomly chosen to present their situational mind maps in class as a pre-reading activity. Other students were asked to comment and advise on developing more branches for the presented maps. For the synonym/antonym mind maps, students were asked to visit the Google Drive folder and comment on other groups' work on FDP mind maps files. The total time of the study was ten weeks; before the time of the study, the allowance and acceptance

were asked from the University and students.

Data collection & analysis

In order to answer the first research question, the self-evaluated test was developed to measure the students' vocabulary. The test adapted the form of the Vocabulary Knowledge Scale to test three dimensions of vocabulary (Henriksen, 1999). The Vocabulary Knowledge Scale could not cover all the knowledge of depth that is proposed by (Anthony, 2009); therefore, at the fourth level of scale, rather than testing only the semantic aspects of words, the other aspects of depth defined by Henriksen (1999) including synonyms, antonyms, and collocations were added to fulfil the shortcoming of the Vocabulary Knowledge Scale. The test includes 50 target words and 10 distractors. The target words were selected from the reading texts that appeared in the coursebook of students during the intervention time. For each target word, there were five options to choose from, including I have not seen this word before (1 point), I have seen this word before but do not know the meaning (2 points), I have seen this word before and know its meaning (3 points), I know this word and know its meaning and its synonyms/antonyms/collocations (4 points), I know the word's meaning and its synonyms/antonyms/collocations and I can make sentence with this word (5 points). For the distractors, no points were given to any option. Therefore, the minimum score of the test was 50, and the test's maximum was 250. The test was used as the pre-test and the post-test of the study; in the post-test, the order of the words was changed.

In order to answer the second research question, the questionnaire was designed based on three aspects of autonomy learning, namely cognitive, metacognitive, and social mediation. The cognitive level had three items indicating the ability to identify and set the learning goals and perform activities to create mind maps on Coggle. The metacognitive level had three items, which explored the ability to plan, evaluate, and organize vocabulary learning and materials when using Coggle to create mind maps. The social mediation level included three items, indicating that the interaction with other students and evaluating others' work on Coggle were covered. The questionnaire was sent to 10 random students who were not majoring in English to ensure the items were easy to understand. After some revisions, the questionnaire was delivered to the participants at the end of the intervention to collect data for analysis. The 5-point Likert Scale is used for the questionnaire items with 1-never, 2-occasionally, 3-sometimes, 4-often, and 5-always. The mean value is interpreted based on the work of Alkharusi (2022), namely 1-1.80 refers to the very low level, 1.81-2.61 refers to the level, 3.43-4.23 refers to the moderate level, and 4.24-5.04 refers to the very high level. The questionnaire was converted into Google form and sent to the students at the end of the study. The Cronbach's Alpha was .089, indicating a high level for the questionnaire; therefore, further analysis was used for the collected data.

Results/Findings and discussion

The data collected from the tests and the questionnaire were analyzed using SPSS.

This study aims to investigate the hypothesis that using electronic mind maps significantly increases the vocabulary knowledge of the Thai Nguyen University of Education students. The mean and deviation of the pre-test and post-test were calculated. Besides, the paired sample test was used to estimate the difference between the scores of students in two tests. The results are presented in Table 1. Students' vocabulary knowledge increased after applying Coggle to build mind maps for learning English vocabulary. In the pre-test, the total score had Mean=82.97 (SD=11.73); this number grew up to 189.39 (SD=9.09) in the post-test; $p=.000 < .05$ and effect

size = 7.01, which indicated that the increase in the vocabulary knowledge of students was significant and the use of electronic mind maps had a large effect on students' vocabulary knowledge.

Table 1.

The statistical results of the tests

	Paired Samples Statistics		Paired Samples Test	Paired Samples Effect Sizes	
		Mean	Std. Deviation	Sig. (2-tailed)	Point Estimate Cohen's d
Vocabulary	Pre-test	82.97	11.73	.000	-7.01
	Post-test	189.39	9.09		
Scale 1	Pre-test	22.56	7.84	.000	2.88
	Post-test	.00	.00		
Scale 2	Pre-test	46.78	13.45	.000	3.10
	Post-test	5.39	2.23		
Scale 3	Pre-test	9.08	7.50	.000	-1.11
	Post-test	34.33	22.02		
Scale 4	Pre-test	2.33	3.22	.000	-4.46
	Post-test	118.56	26.59		
Scale 5	Pre-test	2.22	4.70	.000	-1.76
	Post-test	31.11	15.68		

In order to examine the influence of electronic mind maps on vocabulary dimensions, the same analysis was applied with five scales of the tests. In scale 1 and 2, the score of students significantly decreased from Mean=22.56 (SD=7.84) to 0.00 (SD=0), $p < .05$, $d = 2.88$ and Mean=22.56 (SD=7.84) to 5.39 (SD=2.23), $p < .05$, $d = 3.10$; scale 2 and 3 revealed a different trend with a significant increase from Mean=9.08 (SD=7.50) to Mean=34.33 (SD=22.02), $p < .05$, $d = 1.11$. These results implied that the number of words that students cannot recognize and cannot remember the meanings significantly decreased, and the number of words that students can recognize and remember the meaning significantly increased, which meant that the dimension of partial-precise had positive growth. On scale 4, there was a significant increase from mean=2.33 (4.46) to Mean=118.56 (SD=26.59), $p < .05$, $d = 4.46$, which implied that the number of words that students know the meanings and related words (the depth of knowledge dimension) significantly increased. On a scale of 5, the score grew from Mean=2.22 (SD=4.70) to Mean =31.11 (SD=15.68), $p < .05$, $d = 1.74$, which indicated that the number of words that students knew the meanings, related words, and could make sentences with had a significant increase (receptive-productive dimension).

The results from the test supported the hypothesis that the use of electronic mind maps significantly increased the vocabulary knowledge of the students. It is worth mentioning that the use of the mapping technique affected three dimensions of vocabulary knowledge, including partial-precise, depth of knowledge, and receptive-productive. This finding is in line with the conclusion of (Sari et al., 2023; Al Shdaifat et al., 2019; Kord et al., 2022; Alba, 2022) that the use of mind maps had positive effects on the vocabulary knowledge of students. This result could be explained by the fact that students had to read the text and detect the related vocabulary to build a mind map. They must link the words by different themes, which creates opportunities for students to see and think about the words many times, promoting the work of brains to remember the words better; therefore, the partial-precise scale is developed. In addition,

synonym/antonym maps required students to expand their work on one specific word to find the connection of the words with other related words, which insulates the improvement in the dimension of depth knowledge. Knowing the meanings of words allows students to develop the ability to use words in sentences, which promotes the receptive-productive dimension.

The second hypothesis is that students had a high level of autonomous learning when using electronic mind maps to learn English vocabulary. The data from the questionnaire was analyzed using the mean and standard deviation and compared with the interpretation scale (Table 2). At the cognitive level, all the investigated items had means at a very high level, the overall Mean=4.50 (SD=.51), which indicated that the autonomous learning of students at this level is very high. Regarding the metacognitive level, Mean=4.40 (SD=.54) meant that students had a very high level. The only item that fell below the very high range was that students downloaded the files from the web and saved them in themes. At the social median level, the students had a very high level with Mean=4.50 (SD=.49). The overall autonomous learning of the students had Mean=4.47 (SD=.47), which supported the hypothesis. This finding is consistent with the conclusion of (Alba, 2022; Sa'adah & Wahyuningsih, 2024) that using mind-mapping techniques can give students autonomy in learning. These results can be explained by the fact that to draw a mind map, students have to follow specific steps involved in autonomous learning. At the cognitive level, students had to read the texts and look up related words to complete their theme-based maps. At the metacognitive level, which had a lower mean than the two other levels, the indicators were much more related to the self-control activities and less related to the requirement of the study setting; therefore, to some degree, it was not as high as other levels. The setting of the social mediation level, which asked students to draw mind maps in groups, is the reason for the high level of autonomous learning performance; to find agreement among members, students had to discuss and plan for group work. In addition, creating mind maps in this study is a home-based task that promotes students' autonomous learning.

Table 2.

The statistical results of the questionnaire

Cognitive	Mean	Std. Deviation
I read the texts to find words and related words to make mind maps on Coggle.	4.58	.50
I looked up the meanings of words and their related words to make mind maps on Coggle.	4.67	.48
I took notes of words and their related words to make mind maps on Coggle.	4.25	.81
Mean	4.50	.51
Metacognitive		
I planned time for vocabulary learning and made vocabulary mind maps with Coggle.	4.39	.73
I revisited Coggle to read my mind maps and make changes if necessary before class.	4.61	.60
I downloaded mind maps from Coggle and save them according to themes.	4.19	.82
Mean	4.40	.54
Social mediation		
I made comments and gave feedback on my group's mind maps created on Coggle.	4.69	.47
My group and I discussed finding the best links between words.	4.56	.56
My group and I had rules to work on Coggle to create vocabulary mind maps.	4.25	.77
Mean	4.50	.49
Overall	4.47	.47

In short, the findings of the study could be a reference for English teachers and students at Thai Nguyen University of Education and other educational institutions as an effective way of fostering students' vocabulary in three different dimensions, including partial-precise, depth of knowledge, and receptive-productive according to the definition of (Henriksen, 1999) and Anthony (2009) and motivate students' autonomous learning. In addition, researchers can refer to the study as concrete evidence of the positive influence of electronic mind maps on students' development of English vocabulary in different dimensions and the promotion of students' autonomous learning.

Conclusion

The study aims to investigate the influence of electronic mind maps on the vocabulary knowledge of the students and the level of autonomous learning of them when using mind maps to learn English vocabulary. The findings indicated that using mind maps helps develop students' vocabulary knowledge in all three invested dimensions, including partial precision, depth of knowledge, and receptive-productive. In addition, when using mind maps to learn vocabulary, students perform a high level of autonomous learning. However, the metacognitive level was lower than the cognitive and social mediation, but it was still at a very high level.

While the study's two hypotheses were supported, certain limitations were identified. The self-

reported nature of the tests and questionnaire could potentially introduce bias, leading to inaccurate evaluations. Furthermore, the items used to gauge students' autonomous learning may not encompass all relevant aspects. Therefore, future research should focus on developing more comprehensive tests with clear criteria and a broader range of indicators for autonomous learning.

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Examining English-Majored Students' Performance and Attitudes towards ChatGPT and an Online Dictionary for Lookup

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ABSTRACT

Keywords: ChatGPT, online dictionaries, lookup, English-Majored students

It is true that the recent boom of artificial intelligence (AI), together with generative AI, has substantially transformed language education in myriad facets. In this context, powerful AI chatbots like ChatGPT, Bing AI, or Gemini have become worthy competitors to dictionaries. Hence, the aims of this study were to (1) compare the performance of English-majored students in doing receptive and productive lexical tasks when using ChatGPT and online Oxford Learner's Dictionaries (OLD) as consultation tools and (2) investigate their attitudes towards these two tools in language learning. A quasi-experiment was conducted with 60 Vietnamese English-majored students at Saigon University to achieve these objectives, followed by a questionnaire. The results revealed that students with the assistance of OLD had higher mean scores than those with ChatGPT in the receptive tasks, while the opposite is true for the productive ones. In addition, ChatGPT contributed to noticeably higher improvement scores between the pre-test and post-test in both receptive and productive tasks. In addition, the students also showed positive attitudes towards these tools for their language learning. These findings can provide valuable insights into the current picture among language education, AI, and dictionaries.

Introduction

It is true that fostering vocabulary acquisition has always been an important quest for EFL educationalists and teachers around the world. In the past, when students encountered an unfamiliar lexical item, traditional tools like paper dictionaries or more recently, online dictionaries were utilized to elucidate any linguistic uncertainty. Throughout history, the dictionary has maintained its position as a reliable and prevalent source of reference through many technological changes (Kosem et al., 2018). Despite such adaptability, it is still far from perfect. For example, one notable disadvantage of this tool is that users have to scan most or almost all of the entry pages to acquire the desired information (Ptasznik & Lew, 2024). Given the revolution of dictionaries, transitioning from printed, electronic, to online forms, it seems

the future still holds many improvement potentials for them to resolve existing problems. However, the birth and burgeoning of artificial intelligence (AI) have presented a pioneering and captivating alternative to the world.

Atkins and Rundell (2008) opined that a good dictionary can describe some aspects of its users and purposes of consultation. For instance, medical students preparing for their exams would not utilize an economics dictionary to look up the terms; the same goes for economics students. Hence, it is evident that each individual requires a suitable type of dictionary tailored to their distinct fields, needs, and levels. As the name suggests, learners' dictionaries are crafted specifically for language learners with easy-to-understand definitions and other useful lexicographical features like pronunciation, synonyms, or grammar usage. As for the choice of OLD, it can be regarded as a time-honored and prestigious lexicographical work, as the first version was established in 1948, the earliest day of printing. Today, OLD is one of the world's bestselling dictionaries for English learners and has been recognized for many helpful and necessary merits for users. For example, Dirham and Triyono (2023), who conducted a thorough review on the dictionary, praised OLD for its friendly interface, clear presentation, and ample linguistic information with simple explanations. Therefore, OLD was chosen to be the counterpart of ChatGPT in this study, which is also a leading representative in its respective field.

Although AI had been around years ago, December 2022 marked the launch of ChatGPT, which propelled this up-and-coming technology to worldwide popularity. ChatGPT serves users in the form of chatboxes where questions or commands can be input, and answers will be provided below. What sets ChatGPT apart from its predecessors is how accurate and natural-sounding its responses were in terms of word choice, grammar, or context appropriateness (Ptasznik & Lew, 2024). Atlas (2023) also lauded the ability to comprehend and compose naturalistic texts of ChatGPT, making it eligible for multiple tasks such as brainstorming, writing, and individualized learning.

It is safe to state that ChatGPT has revolutionized how people look up information. Since then, the implications of AI have gradually permeated many important areas. With such a trend, it should come as no surprise that the applications of this technology to the present pedagogical climate, together with its role in comparison with online dictionaries, have been called into question. In addition, few studies have put these two consultation applications into perspective and assessed their usage in the lookup process. The aforementioned reasons explain why this research was conducted: to assess whether a reputable online dictionary could contribute to a higher success rate of lookup than ChatGPT and university students' attitudes towards these two tools for their language learning.

Literature review

The role of dictionary lookup in vocabulary learning

Evidently, consultation is almost certainly the go-to solution when an English learner encounters unfamiliar words or phrases. Hence, many researchers have conducted studies to examine the correlation between consultation and vocabulary learning. For example, Fraser

(1999) found that the combination of consultation and inferencing is highly beneficial to the performance in reading comprehension and vocabulary acquisition of L2 learners. However, it also poses one drawback: an increase in the time needed to complete reading tasks, which is understandable given the nature of paper dictionaries at that time. Hence, the author also encouraged training in lexical processing strategies along with effective dictionary consultation. Other studies from Laufer and Hill (2000) and Lan (2005) also noticed beneficial impacts on word retention with the use of online dictionaries. In addition, the drawback of increased time for lookup was also alleviated thanks to the digital retrieval system, which interferes little with the flow of reading.

Another merit of dictionaries, in general, is the abundance of lexical guidance packed in each entry page. For example, OLD provides users with symbols and labels that structure words into different classifications like Oxford 3000, Oxford 5000, and Oxford Phrasal Academic Lexicon. These labels indicate that the current looked-up word is commonly used in daily or academic contexts, hence, EFL learners can pay extra attention to it. In addition, the use of dictionaries also promotes learner autonomy. Gairns and Redman (2005) stated that an effective dictionary user will be able to continue learning beyond the classroom, which allows him or her to make autonomous decisions in the self-study process.

Niitemaa and Pietilä (2018) conducted a study to investigate the correlation between word recognition skills and the rate of successful lookup. The participants were Finnish EFL upper secondary students who sat two tests: a vocabulary recognition test and one more vocabulary test with free access to online dictionaries. The results showed that there was a positive correlation between the level of word recognition and successful consultation. To acquire 50% correct lookups, the students, on average, had to score at least 60% on the vocabulary recognition test. In addition, the success of dictionary consultation could be attributed to various factors, including quick vocabulary recognition skills, lexicographical knowledge, persistence, collocating words, and digital skills. The findings of Niitemaa and Pietilä posit that there is potentially a correlation between consulting dictionaries and vocabulary acquisition. This viewpoint was backed by Fraser (1999), who opined that dictionary lookups can be a productive process that is beneficial to learning new words. This can be a highly valuable advantage of online dictionaries over AI chatbots.

The role of dictionaries in linguistic reception and production

Receptive knowledge is reflected in understanding a lexical item well enough to interpret its meaning and purpose from a speech or text (Norbert, 2010, as cited in Hamad, 2013). In a similar vein, Norbert also perceived productive knowledge as knowing the word well enough to use it in spoken or written language appropriately. Besides lexical knowledge, another important element contributing to linguistic reception and production development is deep processing tasks, which involve working out meanings from existing knowledge or contexts (Hamad, 2013). With this view in mind, dictionaries should have beneficial impacts on a language learner's receptive and productive abilities.

To prove this, Li and Xu (2015) conducted a study to determine the influence of Macmillan English Dictionary Online in helping Chinese students identify the meanings of verb phrases.

The research involved 32 students at lower intermediate levels doing a meaning determination task with and without the help of the online dictionary. The test was a multiple-choice question in which the participants chose the option with the closest meaning to the given verb phrases. The results of the study showed a marked improvement in the student's performance before and after using the Macmillan dictionary, with the correct rate increasing from 26.25% to 49.69%. The authors concluded that while dictionaries are useful for meaning determination, which belongs to the category of reception, there were still existing problems during consultation made by the students, necessitating future training.

Chen (2016) investigated the use of an electronic dictionary in the production and retention of collocations. 55 English-majored students at a Chinese university were employed for this study. They were asked to complete gapped sentences with collocations of a verb and a noun in a pretest-posttest design with the intervention of an electronic dictionary. The results suggested that the participants significantly improved their knowledge of productive collocation. However, the increased amount of dictionary consultation did not correlate with better production and retention of collocations. Instead, the author advocated deep processing and attention to lexicographical information in dictionaries, which requires dictionary training.

Nation (2001) listed three important components that contribute to understanding a word: form, meaning, and use. Following this, Filer (2017) pointed out that these three components are fully demonstrated in dictionaries. For example, form, which entails pronunciation, spelling, hyphenation, etymology, inflections, and derived forms, can be found in most dictionaries. It is evident that receptive and productive knowledge is a key indicator to assess whether a learner has truly known a word. In other words, being able to recognize a lexical item in its written and spoken form and to use it in conversations as well as texts should be sufficient to conclude that such a word has fully been acquired. In the opposite direction, the mastery of a wide range of lexical items would also translate to proficient reception and production in language.

The emergence of AI chatbots in language learning

Among a variety of useful and innovative functions of AI in language learning like explaining grammatical errors, composing writings in different genres, or giving feedback on texts, this technological breakthrough has also become able to assume the role of a dictionary (Al-Obaydi et al., 2023). In this day and age, language learners can look up the definitions of new words, grammar usage, collocations, synonyms, and other valuable lexical information with just a few commands with AI chatbots. Integrating AI into language education also offers learners personalized learning, which is the ideal approach to contemporary pedagogy (Pokrivcakova, 2019). Y. Nguyen (2023) opined that ChatGPT can become a virtual tutor and a knowledge provider, which allows users to ask questions and receive answers within a short amount of time. With such powerful and widespread implications, a number of lexicographers have voiced their stance on the disappearance of dictionaries in the years to come with the arrival of tools like ChatGPT or Gemini (de Schryver, 2023; Nesi, 2024). With arguments like a single prompt instruction would basically receive the same results of a sophisticated corpus building inside dictionaries or most language learners nowadays will have a preference for fast and effective consultation in AI over the hard-earned answers in dictionaries, it is justifiable to state that the future of dictionaries is gloomy.

Losi et al. (2024) studied high school students' perception of using AI as an assistive tool for vocabulary learning. The research was carried out at an Indonesian high school with 15 to 17 years old students. Quantitative data was gathered through a questionnaire. The study yielded highly positive results as the students were excited to solve vocabulary exercises with the support of ChatGPT. It was also highly praised for offering multifunctional features, one of which is a search engine. Students, especially those in Generation Z, were enthusiastic and had been familiar with using ChatGPT in vocabulary acquisition as well as language learning. Finally, the technology was associated with multiple positive attributes, such as ease of use, convenience, and trustworthiness.

Ptasznik and Lew (2024) also carried out a study to compare the effectiveness of ChatGPT and Longman Dictionary in supporting Polish university students in completing challenging lexical tasks. The authors held a production test and a reception one. In the former, the students were required to translate twenty Polish sentences into English. As for the reception test, they would read English sentences and provide the meaning of the underlined words. The time taken by each student (with a 90-minute limit) was recorded. The findings reveal that students with the assistance of ChatGPT were superior to those using the Longman Dictionary in both of the tests in terms of accuracy. Regarding consultation speed, ChatGPT only outperformed in the production task. Finally, Ptaszniak and Lew praised the merits of interactive and immediate feedback of AI chatbots as well as the facilitation of learner autonomy and language mastery of dictionaries.

On the other hand, some teachers and lexicographers have voiced their concern about the over-reliance on AI technology. For instance, two main possible issues of this tendency were opined by Nesi (2024). Firstly, the overuse of AI chatbots may affect learners' diction, making their word choices similar to journalese, which is unnatural in specific contexts. Secondly, the spoon-fed information provided by AI does not require deep processing, which can be meaningful in comprehension and retention. These two problems are definitely noteworthy in language learning and, therefore, need further research. Another concern was raised by Rundell (2023), which is the question of trust. While the rate of correct answers given by ChatGPT is not absolute, it is also known to be "non-deterministic," which connotes the variation of each answer for the same prompt.

It can be observed that ChatGPT and AI chatbots, in general, are gradually becoming the "default" consultation engine for users around the world. However, much needed clarification is still needed on whether they can completely replace dictionaries in language learning. Therefore, this paper aims to contribute more empirical evidence to the story.

Research Questions

To fulfill the purpose of the study, the authors aimed to answer the following research questions:

1. Do English-majored students at Saigon University who have the assistance of ChatGPT have higher scores in a vocabulary test than their peers with OLD?
2. What are the attitudes of English-majored students at Saigon University towards using ChatGPT and OLD for word lookup?

Methods

Pedagogical Setting & Participants

The research was conducted at the Foreign Language Department of Saigon University, Vietnam. A convenience sampling method was used to recruit 60 participants who were junior students majoring in Applied Linguistics (Business—Tourism) at Saigon University. Students choosing this major are trained to take on responsibilities in English-required organizations like foreign affairs offices, English training centers, or hospitality facilities.

Regarding their English proficiency, in their first and second years, these English-majored students attended six compulsory courses for the four English skills. In addition, they had to achieve an English certificate equivalent to C1 in the CEFR scale to graduate. Hence, it is safe to consider the linguistic level of these students to range between B2 and C1. According to the background survey, their frequency of lookup is exceptionally high, which is as anticipated given their major in English.

Design of the Study

This study used a quasi-experimental design, using a pre-test and a post-test. The pre-test results will be used as a baseline of the participants' lexical knowledge, while those of the post-test will serve as indicators of the differences between the two tools. In addition, the participants' attitudes were also gathered immediately after the post-test to keep their memories of the consultation tools fresh.

The format of the vocabulary tests in this study was adapted from those of Ptasznik and Lew (2024), who created a comprehensive and meticulous experiment to compare the success rate and speed of consultation between ChatGPT and the Longman Dictionary of Contemporary English. As for this study, the pre-test and the post-test share the same structure: a reception task, followed by a production task.

In the reception task, the participants were asked to read 20 English sentences with specific contexts to choose the word with the closest meaning to the underlined word within the sentences (a four-option multiple-choice exercise). The lexical items were picked out from the English Vocabulary Profile, a taxonomy of English words arranged according to the Common European Framework from A1 to C2. The words used in the reception task were all at the C2 level to necessitate the use of consultation tools.

In the production task, they were then required to translate 10 sentences from Vietnamese to English using a given verb. The author decided to limit the number to 10 sentences to avoid burnout during the test, which promotes meaningless filling or blank answers. In order to successfully translate the text, the students needed to find appropriate prepositions to form phrasal verbs with matching meanings. The chosen phrasal verbs were also not commonly used in daily conversations to facilitate lookup. Since the focal point of this study is the lookup process, mistakes in grammar, spelling, or word choice were tolerated as long as they were not concerned with the phrasal verbs.

Examples of these two tasks are as follows:

Reception task: Choose the word with the closest meaning to the underlined word in each sentence.

0. The manager's lenient approach to deadlines resulted in a lax work environment.

A. strict

B. forgiving (correct answer)

C. indifferent

d. confused

Production task: Translate the below Vietnamese sentences into English. You must use the given verbs and add prepositions to form appropriate phrasal verbs.

0. Tôi cần phải ôn lại tiếng Tây Ban Nha. (to brush)

Answer: I need to brush up on my Spanish.

Finally, to assess the students' attitudes towards ChatGPT and OLD for consultation and language learning, a five-point Likert-scale questionnaire ("Totally disagree," "Disagree," "Neutral," "Agree," and "Totally agree" from one to five, respectively) was delivered to them. The questionnaire asks questions related to the potential benefits of the two tools. They are whether ChatGPT or OLD:

- gives accurate information
- gives clear and understandable information
- helps users look up information quickly
- is useful in memorizing new vocabulary
- provides helpful information such as grammatical usage, pronunciation, or examples
- is useful for self-study

Data collection & analysis

1. Pre-test: 60 participants were divided into two groups, 30 participants each. The pre-test was held at their university with the supervision of the authors. Before the test began, the authors informed that the results would be anonymous and inconsequential to their academic scores. Both groups of students then used their smartphones to complete the pre-test through Google Forms without any assistance. The authors decided not to record the time taken to complete both of the tests as there were too many influencing variables.
2. Intervention: Before the post-test, the authors instructed the students on how to employ ChatGPT and OLD effectively to solve the receptive and productive task.
3. Post-test: The post-test setting was identical to that of the pre-test regarding the test format, timing, and other conditions to ensure consistency of measurement. The main difference was that while one group used ChatGPT for lookup, the other employed

OLD. The participants once more used their smartphones to complete the test, which required switching between Google Form and the consultation tools.

4. Survey: Immediately after the post-test, the questionnaire was delivered to both groups to elicit their views on ChatGPT and OLD.

Afterward, the collected quantitative data was analyzed with the main focus on comparing the pre-test and post-test results using paired-sample t-tests. Regarding the reception task with 20 multiple-choice questions, each incorrect answer translates to a one-point deduction. As for the production task, there were 10 translation exercises, each of which is worth one point. Finally, the authors used descriptive analysis to assess the participants' attitudes toward ChatGPT and OLD.

Results/Findings and Discussion

Table 1. Total mean score of the frequency of lookup conducted by the participants

		N	Mean	SD
1	Frequency of lookup	60	3.58	0.62

Note: N: Total participants; M: Mean scores; SD: Standard deviation

Table 1 illustrates how frequently English-majored students at Saigon University performed consultation for unfamiliar lexical items (using any supportive tools). The survey questions were on a four-point Likert scale, including Always, Often, Seldom, and Never, and they ranged from four to one (“Always” for four). The results indicate that the participants regularly looked up new words (M=3.58; SD=.62). Such outcomes were expected as they all majored in English fields, which necessitated lookup on a frequent basis.

Table 2. Total mean scores of the pre-test and post-test of the two groups (receptive task)

Total mean scores (receptive task)			Max = 20		
			N	M	SD
1	ChatGPT	Pre-test	30	12.60	3.33
		Post-test	30	18.57	1.41
			p < 0.05		
2	OLD	Pre-test	30	14.60	3.12
		Post-test	30	18.70	1.44
			p < 0.05		

Note: Max: Maximum score, N: Total participants; M: Mean scores; SD: Standard deviation

Table 2 depicts the average scores of the participants in the receptive task in both of the tests. This is the first section of the pre-test and post-test, which includes 20 multiple-choice questions. As can be seen from the table, there was a two-point difference in the pre-tests between the ChatGPT group (M=12.60; SD=3.33) and the Oxford one (M=14.60; SD=3.12). Surprisingly, the results of the post-tests indicate that the group using ChatGPT (M=18.57; SD=1.41) performed lower than that utilizing OLD (M=18.70; SD=1.44), however, the disparity value is insignificant. Another noteworthy observation is that ChatGPT was able to better improve the scores between the pre-test and the post-test with a 5.97 improvement score while that of OLD is 4.10. The p-values of both of the groups were also recorded to be less than

0.05, suggesting a noticeable improvement between the pre-test and the post-test owing to the intervention of ChatGPT and OLD.

Table 3. Total mean scores of the pre-test and post-test of the two groups (productive task)

Total mean scores (productive task)			Max = 10		
			N	M	SD
1	ChatGPT	Pre-test	30	1.60	1.30
		Post-test	30	8.50	1.36
			p < 0.05		
2	OLD	Pre-test	30	3.17	1.90
		Post-test	30	8.23	1.61
			p < 0.05		

Note: Max: Maximum score, N: Total participants; M: Mean scores; SD: Standard deviation

Table 3 illustrates the comparisons between the results of the productive task of the ChatGPT group and the Oxford group. This is the second and final section of the tests, encompassing 10 translation exercises using phrasal verbs. According to the pre-test outcomes, this section was highly challenging as the Oxford (M=3.17; SD=1.90) and ChatGPT (M=1.60; SD=1.30) groups both achieved below-average mean scores. The Oxford group one more time demonstrated better vocabulary resources than the ChatGPT one with a 1.57 disparity value. However, ChatGPT (M=8.50; SD=1.36) contributed to a higher success rate than OLD (M=8.23; SD=1.61) in the post-test. Hence, the improvement score of the AI chatbot was also superior to that of the online dictionary (6.90 for the former and 5.07 for the latter). The p-values of the two groups are also below 0.05, indicating a significant improvement from the pre-test to the post-test.

Table 4. The mean scores of students' attitudes towards ChatGPT and OLD

Students' attitudes towards ChatGPT and OLD		ChatGPT N = 30		OLD N = 30	
		M ₁	SD ₁	M ₂	SD ₂
1	The tool I've just used provides accurate information.	4.17	0.79	4.33	0.84
2	The tool I've just used provides clear and understandable information.	4.53	0.63	4.30	0.84
3	The tool I've just used helps me look up words fast.	4.43	0.90	3.87	1.28
4	The tool I've just used helps me memorize words effectively.	3.27	0.94	3.63	1.10
5	The tool I've just used provides useful linguistic information (grammar usage, pronunciation, examples, etc.)	4.00	0.93	4.20	0.89
6	The tool I've just used is useful for my English self-study.	4.00	0.98	4.13	0.97
7	I will continue using this tool to learn English.	4.37	0.77	4.27	1.17

Note: N: Total participants; M: Mean score; SD: Standard deviation

Finally, Table 4 depicts how English-majored students perceived their respective lookup tool after completing the post-test. Based on the survey, ChatGPT and OLD were considered to provide accurate and clear information, with mean scores above 4.0 in items 1 and 2. A noticeable disparity can be seen regarding the speed of consultation. While the majority of ChatGPT users agreed that it helped them look up words fast (item 3: $M_1=4.43$; $SD_1=.90$), the mean score for OLD is relatively inferior to that (item 3: $M_2=3.87$; $SD_2=1.28$). Another noteworthy feature is that the participants did not think highly of ChatGPT and OLD when memorizing new words as their mean scores were the lowest among the seven items (item 4: $M_1=3.27$, $SD_1=.94$; $M_2=3.63$, $SD_2=1.10$). The remaining categories related to useful linguistic information, self-study process, and preference witness little difference between the two tools. Generally, the students expressed positive attitudes towards the AI chatbot and the online dictionary during the lookup process.

Conclusion

This study hopes to provide valuable insights into the efficiency of AI and online dictionaries in the process of lookup. In addition, what English-majored students think about these tools after using them is another topic of research.

According to the results, in the receptive test, which requires students to determine the meaning of words in specific contexts, students using the online Oxford dictionary just closely outperformed those who utilized ChatGPT. However, the AI technology had a noticeably greater improvement score from the pre-test to the post-test compared to OLD, which is the main indicator of how effective each tool is. Regarding the productive test in which the participants translated Vietnamese sentences into English ones with suitable phrasal verbs, ChatGPT also outperformed OLD with a higher mean score. Moreover, a greater improvement score between the pre-test and post-test was recorded on the side of ChatGPT. These results are relatively consistent with the study conducted by Ptaszniak and Lew (2024), which indicated that ChatGPT was dramatically more effective in both reception and production tasks in comparison with the Longman Dictionary of Contemporary English. Similar findings were also found in the study of Phoodai and Rikk (2023), who compared the lexicographical data given by ChatGPT and Oxford Advanced Learner's Dictionary (OALD) to assess their effectiveness in consultation for language learners. In this research, ChatGPT one more time outperformed OALD in providing correct lexicographical items.

As for the survey on the attitudes of English-majored students, most of them perceived ChatGPT and OLD as useful applications. The aspects that received highly positive results are accurate information, clear and understandable content, helpful lexical knowledge provision, and self-study facilitation. Such positivity is in line with previous research as synthesized by C. Nguyen (2023), who concluded that a great number of existing studies also share the same results. Particularly, the advantages of ChatGPT's personalized and fast learning assistance were highly merited. As expected, the students did not regard the consultation speed of online dictionaries highly compared to ChatGPT. Finally, the use of these two tools in vocabulary memorization was not of positive attitudes of the students as it received the lowest mean score

among the items surveyed.

From the results of this research, it is evident that ChatGPT was almost better than OLD in every aspect, marking the emergence and prevalence of AI in educational fields. Thanks to its responsive and natural linguistic processor, this technological breakthrough has made finding answers to lexical questions and problems much easier. Nevertheless, we do not believe that the traditional lookup method will completely disappear in the future, as online dictionaries can still be handy in certain situations. For example, when a user knows the exact word to look up, it is definitely faster to type it into dictionaries than in AI chatbots, which still require a short delay to respond. In addition, the overdependence on AI technology also carries unwanted effects like shallow word processing of language learners, repetitive journalese diction, or inaccuracy, as mentioned in the literature review. Thus, future efforts should focus on eliminating such shortcomings and finding appropriate roles for dictionaries and AI to best serve language learners and users in general.

This paper understandably has several limitations. Firstly, due to practical constraints, the sample size of this study was limited to only 60 participants, which reduced its generalizability. Therefore, researchers interested in this topic can increase the number of participants and include students of different majors to achieve more reliable results. Secondly, given the complexity of quasi-experimental or experimental research in general, with a great number of variables to consider, it is important to acknowledge that the data collection and analysis could be further refined. Hence, future studies with stricter and more comprehensive methods are highly encouraged.

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Evaluating HUFLIT Lecturers' Perspectives on ChatGPT's Capabilities in Designing English Testing and Assessment

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ABSTRACT

Keywords: ChatGPT's capabilities, testing and assessment, lecturers' perspectives, HUFLIT

Despite its widespread adoption in education, the potential of ChatGPT in English language teaching and learning, especially in testing and assessment design, still needs to be studied. This paper, therefore, seeks to investigate lecturers' perspectives on the capabilities of ChatGPT in designing English testing and assessment with the participation of thirty lecturers of the Faculty of Foreign Languages at HUFLIT. Data from the questionnaire and semi-structured interview suggest that ChatGPT is a promising tool for designing English testing and assessment owing to its versatility in drafting quicker, more diverse, and more detailed types of questions, resulting in enhanced time efficiency and reduced efforts in test design. The greatest areas of concern, however, lie in ChatGPT's inability to generate questions that match the specific learning outcomes and students' linguistic abilities. The study contributes to providing lecturers with in-depth insights into the potentialities and challenges of ChatGPT in testing and assessment design, assisting them in employing this AI tool more critically and effectively.

Introduction

Evaluation of students' academic progress has always been an indispensable part of the teaching and learning process, through which teachers can gain in-depth insights into such aspects as the quality of their lessons, the varying degrees of knowledge absorption among students, and the appropriateness of the current teaching methodologies. Teachers are also more likely to assess the real challenges facing their students, through which they can seek effective measures to tackle these prevailing issues. On students' side, evaluative activities provide them with invaluable opportunities to reflect on their strengths and weaknesses, the efficacy of the learning strategies they are adopting, the gaps in their knowledge, as well as the potential steps they might take to fill these gaps and improve their academic performance.

A commonly held belief is that testing and assessment are powerful and effective measures of students' achievements. Testing and assessment tools can be employed to provide "systematic feedback for both teachers and learners" (Beikmahdavi, 2016, p. 130) and are a means of checking whether there is a match between the set learning outcomes and students' actual performance; therefore, designing a test or an evaluative activity often requires long hours of sustained efforts and critical thinking and must ensure a variety of objective criteria including "practicality, validity, and reliability" (Beikmahdavi, 2016, p. 130). Traditionally, teachers who were supposed to design tests and different forms of assessment used to take on the responsibility manually, which involved selecting the tested knowledge areas or skills, writing down question types and exercises on paper, generating answers, and proofreading the tests to double-check typical errors. Along with technological advances, the drafting of tests and assessment tasks has become less complicated when teachers are able to compose tests and assessment forms on their computers or laptops and make full use of free checkers online for error rectification, which assists them in saving large amounts of time and energy.

The incorporation of Artificial Intelligence (AI) tools into language teaching and learning activities has brought a new breath of air into educational settings, lifting learners out of the boredom of being confined in classroom walls while simultaneously taking them to a virtual world filled with interactive games and scaffolding learning activities that facilitate the process of knowledge acquisition and skills enhancement with greater ease. In terms of evaluation, AI tools such as ChatGPT and Gemini, to name but a few have made radical transformations to not only the way students are tested but also the job of designing tests and exams carried out by teachers. Instead of devoting hours to composing questions for a test or an exam, teachers, especially those working at tertiary institutions, find it much more straightforward to embark on testing and assessment design with the aid of ChatGPT.

Studies on ChatGPT's potential for devising testing and assessment are available (Almasre, 2024; Anderson et al., 2001; Kolade et al., 2024; Rasul et al., 2023; Rudolph et al., 2023). However, research conducted on the same topic in language teaching and learning is still limited, and studies regarding the utilization of ChatGPT to design English tests and other forms of assessment are also scarce in the context of Vietnamese education. There is an urgent need for more studies to investigate the capabilities of ChatGPT in facilitating lecturers' task of designing tests and relevant forms of assessment.

Literature review

An overview of ChatGPT

The release of ChatGPT by OpenAI in 2022 has entailed a host of opportunities in various major fields of life while simultaneously posing inevitable challenges to its users. Being "built on top of OpenAI's GPT-3 family of large language models and is fine-tuned with both supervised and reinforcement learning techniques" (Rudolph et al., 2023, p. 345). ChatGPT allows engagement in conversations resembling those of humans and produces texts that are challenging to distinguishable from human-generated ones (Roumeliotis & Tselikas, 2023). Utilizing ChatGPT gives users a sense of two-way interaction since it can respond to any

prompts of various forms, such as requests or questions, in a quick manner, and the responses can be meticulous and generally accurate (Gonsalves, 2023; Roumeliotis & Tselikas, 2023; Rudolph et al., 2023). It is ChatGPT's vast storehouse of linguistic knowledge and its competence in pattern identification and analysis that make it likely to undertake a diversity of tasks of varying degrees of complexity required by users (Almasre, 2024; Farazouli et al., 2023), ranging from creating quizzes, answering questions, to planning activities and translating texts as well. In other realms, ChatGPT can demonstrate its capabilities in the production of content, code, and pieces of writing (Almasre, 2024). It can be, therefore, said that ChatGPT has proved its enormous capacity for generating human-like conversations and texts of diverse purposes.

Merits of ChatGPT in education

One of the most outstanding benefits of employing ChatGPT in teaching and learning is this AI tool can provide learning experiences that are “tailored”, “customized”, “personalized”, or “individualized” (Amin, 2023, pp. 1-2; Baskara & Mukarto, 2023, p. 349; Rasul et al., 2023, pp. 4, 6) which, according to Amin (2023), often involves handling issues relevant to each individual student's needs and paces of learning. He also added that this kind of personalized learning proved to be an obstacle to conventional classrooms where teachers could not respond to every student's needs as effectively as ChatGPT. In language learning, personalized learning is of crucial importance as it helps to facilitate the process of acquiring knowledge and skills among learners of different abilities and preferences. What is more, ChatGPT has the potential to assist lecturers in integrating “real-time language practice” (Amin, 2023, p. 1) into their lesson or teaching activities, meaning that the increasing exposure to real-life situations affords students the opportunity to boost their linguistic skills since they can practice applying the learned speaking patterns or lexical items to their daily conversations and in-class activities like debates or role-plays, thereby gaining a thorough understanding of the language they strive to master. From this, skills such as problem-solving and critical thinking are also greatly fostered. Another interesting feature of ChatGPT is the provision of prompt feedback and “round-the-clock access to knowledge” (Graefen & Fazal, 2024; Rasul et al., 2023). Indeed, feedback forms a solid base of precious information that can inform students of their strengths, weaknesses, and methods of improving their existing shortcomings. Since human teachers are not always approachable, gaining feedback from AI assistants such as ChatGPT seems more practical. Ready access to knowledge at all times of the day benefits language learners in an enormous way. By means of making question prompts relevant to the areas of knowledge they wish to delve into, learners could acquire an understanding of certain issues across various domains with greater ease. Last but not least, ChatGPT's ability to expose students to authentic sources of language could allow students to be engaged in meaningful practice that further harnessed their linguistic proficiency and comprehension skills, along with arousing their motivation for learning (Baskara & Mukarto, 2023).

Downsides of ChatGPT in education

In spite of being known for its tremendous benefits in education, ChatGPT also encountered a host of criticisms. One of these is the provision of information or content that is regarded as “incorrect or misleading”, “biased or inappropriate” (Borji, 2023; Sallam, 2023, as cited in

Baskara & Mukarto, 2023, p. 347). In their research findings, Baskara & Mukarto (2023) also pointed out that ChatGPT was lacking in "human nuance" which involved an awareness of cultures and language use in an appropriate manner. This is understandable since ChatGPT has been primarily trained on language models to produce texts that bear a resemblance to human ones. Meanwhile, the mastery of language is not confined to the proficiency of linguistic skills, but it demands learners to grasp an adequate understanding of the culture of the targeted language and communicate their ideas with real emotions. Another concern raised among educators regarding the adoption of ChatGPT is that it can lead students to commit plagiarism as students are overreliant on the chatbot, utilizing it to gain better academic achievements while sacrificing their own writing skills. Additionally, the findings drawn from the study undertaken by Pham and Le (2024) indicate that excessive dependence on ChatGPT could undermine the competence of thinking creatively and critically among students. Finally, ChatGPT may encounter difficulties concerning the provision of precise responses when it comes to a particular domain (Abas et al., 2023) due to the lack of inadequate training in that domain, which could detrimentally influence students' academic performance.

Testing and assessment

Testing and assessment methods serve as pivotal tools that “gauge students’ knowledge, skills, and progress” (Amin, 2023, p. 2), providing invaluable sources of information for betterment in achieving outcomes in both teaching and learning. The dual purpose of assessment described in the words of Kolade et al. (2024, p. 2) is “facilitation of learning on the one hand, and certification of achievement, on the other.” This twofold aim can be fulfilled provided that there are concerted efforts between teachers in employing methodologies and assessment tools that are ideally suited to students’ abilities and learners who willingly embrace the teaching and evaluation methods.

Testing and assessment in English language teaching and learning

In the educational domain, especially English language teaching and learning, students’ academic performance has been evaluated in a diversity of ways. Traditionally, teacher-based assessment methods served as the principal ones for monitoring students’ progress in particular English subjects, with summative assessment methods being adopted to measure what students have achieved for a particular duration of time by means of tests or examinations (Almed et al., 2019; Trumbull & Lash, 2013). Summative assessment featuring a pen-and-paper test format has been favored by numerous teachers owing to their acquaintance with this format and its simplicity (Fadilah et al., 2023). Brown (2004) (as cited in Almed et al., 2019) highlighted the strength of summative assessment, which primarily revolves around the evaluation of students' accomplishment of course objectives, and pointed out its limitation in providing orientation for their future enhancement in learning. It is this limitation that has aroused doubts about the efficacy of summative assessment in assisting students to make academic improvements (Mansory, 2020), leading to the emergence of formative assessment methods that can be implemented on a more regular basis, involving greater interaction, and encompassing a mixed array of tests and evaluative activities, all of which do not aim to form ultimate judgments on students' performance over a specific time span but direct students' learning based on individual learning needs and garner feedback serving as guidelines for facilitating both students'

academic studies as well as teachers' professional development (Trumbull & Lash, 2013; Widiastuti & Saukah, 2017). According to these researchers, the major distinction between these two types of assessment lies in the fact that the former solely focuses on the collection of final results or products, resulting in the absence of feedback for improvement suggestions, whereas the implementation of the latter is an on-going process, measuring students' abilities through a wider range of tasks and instructing students on how to make progress based on feedback gathered from their performance in each activity.

Formative assessment in English language classrooms usually includes such activities as open discussion, task-based learning, self and peer assessment (Black & Jones, 2006), homework, projects, journal writing, role-plays, assessment through portfolios (Chandio & Jafferi, 2015), performance-based assessments, games, and teachers' observations (Moqbel & Al-Kadi, 2023), and so on. These various activities are designed to foster students' linguistic skills and competencies rather than place an emphasis on grammar and memorization abilities (Chandio & Jafferi, 2015).

The potential of ChatGPT in tests and assessment design

Designing exam questions and tests used to be an arduous and time-consuming task. Since the advent of ChatGPT, however, much of teachers' job of devising tests and evaluative activities has been eased in terms of grading and feedback offering owing to two benefits, which are accurate grading automation and detailed comments (Almasre, 2024). Almasre (2024) pointed out in his research when assessing 12,100 essays from the ETS Corpus of Non-Native Written English (TOEFL11) based on the criteria specified in the IELTS Writing Task 2 band score descriptors by means of ChatGPT that the scores of the compositions were perceived to achieve a good degree of reliability and precision. Meanwhile, the feedback provided by ChatGPT was more specific and legible compared to that offered by teachers. ChatGPT has gained recognition for its capability in drafting assessment questions, especially in initial idea generation for assessment design, creation of multiple choice questions, production of case studies drafts, or other forms of assessment for further edition (Rasul et al., 2023). Apart from this, ChatGPT is known for its ability to re-evaluate tasks, focusing on developing students' higher-order thinking, such as creativity and critical thinking (Nieminen et al., 2022, as cited in Rasul et al., 2023) and "the potential to serve as a means of generating different scenarios for students to work together to solve problems and achieve goals" (Rudolph et al., 2023). Moreover, ChatGPT-generated scenarios bear significant resemblance to those of real-life situations (Kolade et al., 2024). This means that ChatGPT is capable of evaluating students' abilities and skills, reflected through its versatility in generating a mixed variety of tasks to assess learning outcomes, and the scenarios generated by the chatbot can be beneficial to language learners in their training of communication, problem-solving, and teamwork skills. Anderson et al. (2001) suggested ways to leverage ChatGPT's capabilities on making lesson plans, scaffolding writing, and drafting assessment activities, highlighting that the tool can be trained to cope with ideas in the 'lower order thinking' category in accordance with Bloom's taxonomy, and the responses generated by ChatGPT should be critically evaluated to assess its competence in handling questions that require higher order thinking skills.

The potential of ChatGPT in English tests and assessment design

Since its arrival, ChatGPT has been perceived as a promising tool for English language teaching and learning as well as assessment design. The results obtained from the study conducted by Zaiarna et al. (2024) suggest that ChatGPT is particularly beneficial to test and assessment design across language aspects, particularly in grammar, writing, and vocabulary. In addition, a study undertaken by Koraishi (2023) reveals that ChatGPT is capable of generating reading passages that can cater to individual preferences, learning needs, and levels of proficiency in accordance with the predetermined topics and contexts. Koraishi (2023) also added its potential to design corresponding kinds of comprehension questions coupled with its capacity to adjust the questions based on rephrased prompts can also help teachers utilize the ChatGPT-generated content but still ensure its suitability for different classes. Designing tests, quizzes, and activities for vocabulary consolidation in diverse formats has become much simpler and more time-efficient for teachers as well with the aid of ChatGPT (Koraishi, 2023). From this researcher's findings, ChatGPT demonstrates its capabilities not only for producing varied question types, placement tests, and standardized tests but also for providing evaluation of students' linguistic levels, thorough, constructive feedback, and recommendations for corrections on the basis of set criteria. In a similar fashion, the results of the study conducted by Nguyen (2023) on the topic of applying ChatGPT in language test design show that this AI assistant tool is adept at generating texts not only for reading but also for listening comprehension provided that teachers give detailed instructions on the characteristics of the outcome they wish to achieve and highlight the adaptation ability of ChatGPT in text refinement to assist teachers to enhance or lower the textual level of difficulty. Moqbel & Al-Kadi (2023) suggested in their research that the employment of ChatGPT could act as a tool for acquiring information related to students' strengths and weaknesses and learning strategies so as to decide on the most appropriate assessment forms. Likewise, Amin (2023) also pointed out the utilization of ChatGPT to provide informative analysis of students' responses to various assessment tasks so that areas of improvement could be identified for enhancing learning outcomes.

The drawbacks of utilizing ChatGPT in tests and assessment design

A limitation concerning the use of ChatGPT in assessment in the findings of Rudolph et al. (2023) is this AI-assisted tool fails to illustrate mathematical problems with diagrams. Likewise, in his research on how to draft multiple-choice questions that challenged ChatGPT, Gonsalves (2023) suggested that teachers should take advantage of questions that require ChatGPT to handle content relevant to figures, images, or charts since it is unable to read visually presented information. This means that if teachers wish to devise exam questions concerning the use of images or diagrams, it may prove a major obstacle to the chatbot. He added that user prompts also had a decisive effect on ChatGPT's competence in handling the task. If a prompt shows a high degree of complexity, it could overlook some parts of the prompt and tend to produce inaccurate answers. Rudolph et al. (2023) found out that for essay writing, the chatbot was likely to produce a composition with an amazing speed; however, the content was regarded as lacking in "breath and depth," which was even deteriorated by its failure to include in-text citations and references. It was also pointed out by Rudolph et al. (2023) that the chatbot was incapable of generating content requiring higher-order thinking, such as critical and analytical

thinking skills. Finally, a shortage of critical thinking originating from the ready availability of information coupled with the simple process of text creation (Sullivan et al., 2023; Tlili et al., 2023, as cited in Kostka & Toncelli, 2023), and the imprecise information produced by ChatGPT (Kostka & Toncelli, 2023) demanded a great emphasis on critical thinking and evaluation abilities (Heaven, 2023) among lecturers.

Research Questions

The purpose of this study is to evaluate the capabilities of ChatGPT in assisting HUFLIT lecturers of English in designing tests and other types of assessment. The research aims to seek the answers to the following questions:

1. What are ChatGPT's potential capabilities in the design of tests and assessments from the standpoint of English lecturers at HUFLIT?
2. What are the challenges HUFLIT's lecturers of English may encounter regarding ChatGPT's competence in tests and assessment design?
3. What can lecturers of English at HUFLIT do to enhance ChatGPT's capabilities in tests and assessment design?

Methods

Pedagogical Setting & Participants

The participating subjects of the study involved thirty lecturers of English of the Faculty of Foreign Languages at Ho Chi Minh University of Foreign Languages and Information Technology (HUFLIT). These lecturers, whose age ranges from 27 to just under 45, possess a diversity of years of teaching experience in English-related subjects, ranging from English skills to English theory and specializations such as English phonetics and phonology, morphology, syntax, semantics, English for business purposes, and English language teaching. The proportion of female lecturers is significantly higher than that of males, and the participants have had experience of varying degrees in adopting ChatGPT to design English tests and other types of evaluative assessment for a range of classes of different English competence levels (primarily from A2 to C1).

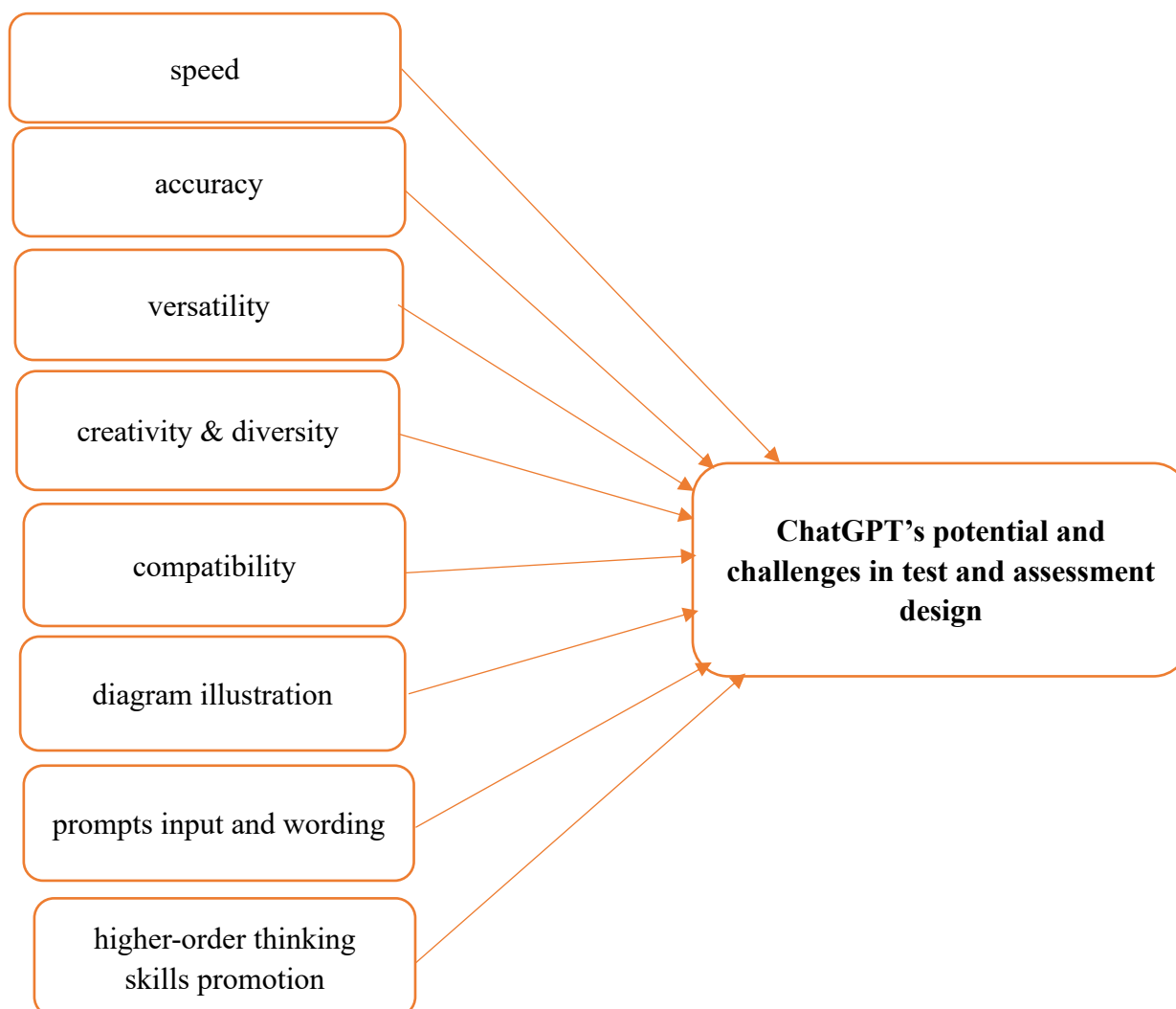
Design of the Study

The research paper employed a mixed-methods approach, with the main instruments consisting of a questionnaire of various question types and a semi-structured interview. The rationale for adopting the questionnaire is its great convenience, quickness, and ease of implementation (Kuphanga, 2024), while the semi-structure interview allows the examination as well as the gathering of diverse perspectives and attitudes of participants, thereby providing in-depth insights into the research topic (Jain, 2021), which in turn contributes to the enhancement of the reliability and validity of the findings.

The questionnaire was designed based on a conceptual framework with the adoption of the convenience sampling method. The factors contributing to ChatGPT's competence in devising tests and assessments are placed under one group called independent variables, while the dependent variable is ChatGPT's potential and challenges in test and assessment design. Below

is the illustration of the conceptual framework for framing the questionnaire:

Figure 1. The conceptual framework illustrating the potential capabilities and challenges of employing ChatGPT in test and assessment design



The vast majority of the questionnaire items were designed based on the findings and discussion of Rudolph et al.'s (2023) and Gonsalves' (2023) studies, while the conceptual framework was adapted from the conceptual framework named "The benefits and challenges of ChatGPT – an integrated framework" suggested by Rasul et al. (2023). Several questions with further details were added based on the researcher's experience while utilizing ChatGPT as a test and assessment design tool, but their content still centered around the main concepts in the above-mentioned framework.

The questionnaire encompassed twenty-one questions revolving around four major sections pertinent to the use of ChatGPT in tests and assessments, the benefits of employing ChatGPT in designing English tests and assessments, the challenges concerning the adoption of ChatGPT in English tests and assessment design, as well as lecturers' recommendations for enhancing ChatGPT's capabilities in the drafting of English tests and forms of assessment. Apart from multiple choice and 5-point Likert scale questions, open-ended questions were also included in

the questionnaire to investigate the participants' points of view on the employment of this AI-assisted tool on their tests and assessment designing process. All of the questions were composed on Google Forms, whose link was quickly generated and then distributed to the lecturers via their Zalo accounts.

The semi-structured interview was composed of three fundamental questions and a number of follow-up questions on the basis of the research questions formulated in the previous section, which was conducted on Microsoft Teams with the participation of seven randomly chosen lecturers. Convenience sampling was employed in the construction of the interview so as to select the interview samples which could be easily approachable and eligible for the research study.

Data collection & analysis

The distribution of the questionnaire commenced in the last week of May 2024 and lasted two weeks. The link to the questionnaire was generated from Google Forms and administered through Zalo. All of the survey participants' answers were automatically saved in the tab entitled 'Responses' on Google Forms, which greatly facilitated access to the data later on. Prior to the conduct of the interview, approval was obtained from the lecturers who were invited to respond to the questions on the topic of evaluating ChatGPT's abilities in designing English tests and assessments. Each interview session took place in approximately 15 minutes, and the answers were recorded and transcribed for analysis.

The data garnered from the questionnaire had undergone a meticulous process of analysis before being presented in the form of different figures, such as diagrams and tables, with the support of Google Forms. Thematic analysis was utilized to identify themes prevailing in the interviewees' responses, which enables the provision of detailed insights into the participants' attitudes towards the adoption of ChatGPT in devising English tests and assessments.

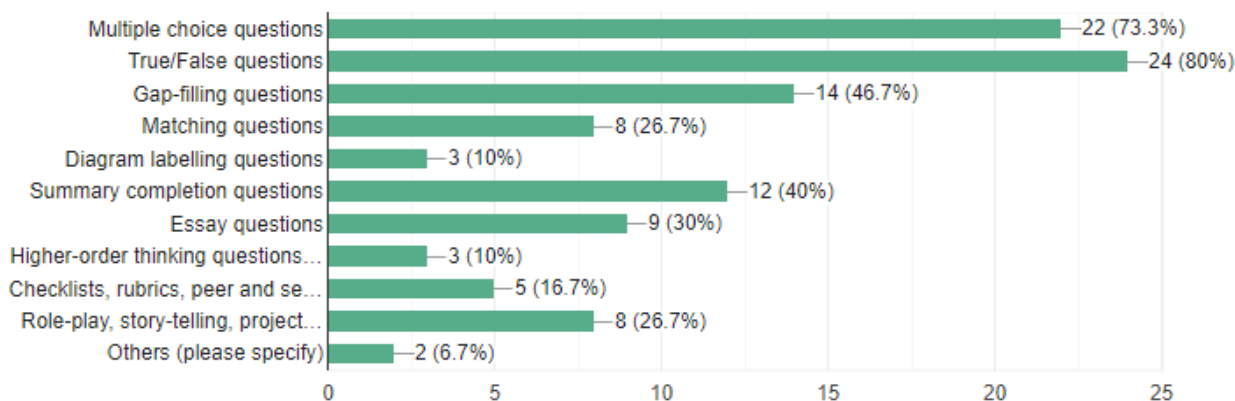
Findings and discussion

Research Question 1: What are the potential capabilities of ChatGPT in the design of tests and assessments from the standpoint of lecturers of English at HUFLIT?

Results of the questionnaires

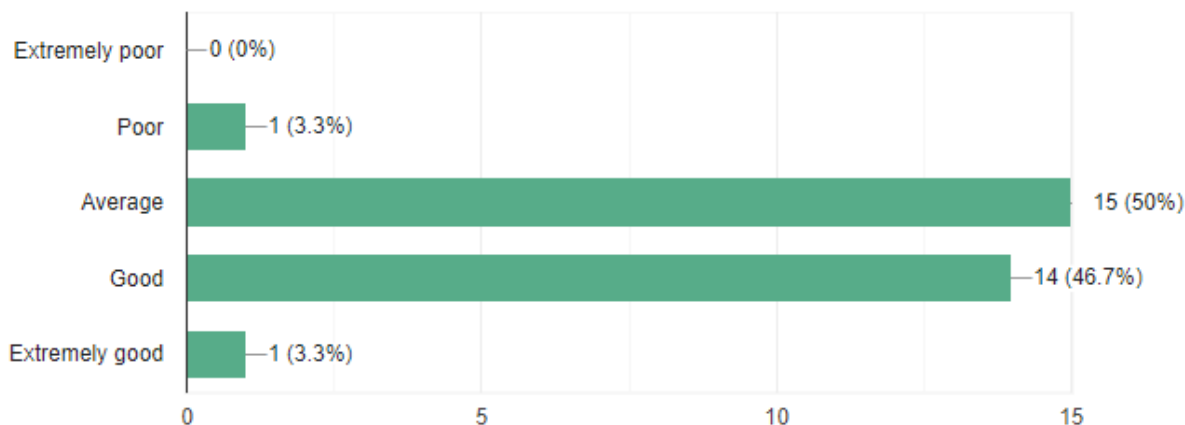
Section 1 of the questionnaire deals with the use of ChatGPT in tests and assessment design.

Figure 2. The types of questions ChatGPT was often required to design



As can be seen from Figure 2, the two most prevalent types of questions ChatGPT was required to design were True/False (80%) and multiple choice questions (73.3%). This was followed by gap-filling, summary completion, and essay questions, making up 46.7%, 40%, and 30% respectively. Matching questions,, as well as role-play, story-telling, and project activities,, equaled in terms of popularity, accounting for 26.7% each, which was more common than such activities as checklists, rubrics, peer, and self-assessment. Diagram labelling and higher-order thinking questions (evaluation, critical thinking, or problem-solving questions, etc.) were the least preferred kinds of questions ChatGPT was requested to devise.

Figure 3. Rating of ChatGPT’s capabilities of designing English tests and assessment



According to Figure 3, the percentages of participants who ranked ChatGPT’s competence in English tests and assessment design as good or average were roughly similar, at around half for each, with only one lecturer having perceived the tool to be an excellent tool, whereas one participant considered it to be poor in drafting tests and exam questions.

Section 2 is centered around the lecturers’ perspectives on the benefits of employing ChatGPT in designing English tests and assessments.

Table 1. The benefits of employing ChatGPT in designing English tests and assessment

<i>Statements</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>
ChatGPT can create questions that match lecturers' prompts.	<u>3.3%</u>	<u>60%</u>	33.3%	0%	3.3%
ChatGPT can devise questions more quickly than lecturers can.	<u>23.3%</u>	<u>46.7%</u>	30%	0%	0%
ChatGPT-produced questions are more accurate than human-generated questions.	0%	36.7%	43.3%	20%	0%
The questions generated by ChatGPT are more interesting than those designed by lecturers.	0%	26.7%	46.7%	23.3%	3.3%
ChatGPT can create a wider range of questions.	<u>20%</u>	<u>50%</u>	16.7%	10%	3.3%
ChatGPT-generated questions can cover a wide variety of theoretical and application aspects.	<u>3.3%</u>	<u>40%</u>	40%	16.7%	0%
ChatGPT can draft questions with very detailed instructions on how to implement the activities in the classroom.	<u>6.7%</u>	<u>43.3%</u>	36.7%	13.3%	0%
ChatGPT can also design questions to evaluate students' higher-order thinking skills.	3.3%	30%	43.3%	23.3%	0%
Utilizing ChatGPT to design tests and assessments can save lecturers large amounts of time and energy.	<u>36.7%</u>	<u>46.7%</u>	16.6%	0%	0%
Lecturers can learn from the structured format of the questions generated by ChatGPT, from which their competence in designing tests and assessments could be developed.	<u>16.6%</u>	<u>56.7%</u>	26.7%	0%	0%

A closer look at Table 1 reveals that the most outstanding strength of ChatGPT, from the viewpoint of lecturers of English at HUFLIT, was ChatGPT's potential to save them large amounts of time and energy in drafting questions (83.4%), the opportunities for these lecturers to nurture their competence in designing English tests and assessment through the consultation of structured formats of the questions generated by the chatbot (73.3%), the tool's capabilities to produce a wider range of questions as well as in a quicker manner compared to those devised by human teachers (70% each), and its ability to create questions that match lecturers' prompts (63.3%). ChatGPT was also highly evaluated for its drafting of questions with very detailed

instructions on implementing the classroom activities. The percentage of lecturers expressing their approval of ChatGPT's competency in covering a wide variety of theoretical and application aspects comprised just under half. Those who agreed with the statement that the tool could generate more precise questions than human-produced questions and evaluate students' higher-order thinking skills accounted for similar proportions, at approximately a third. The figure for lecturers who regarded questions designed by ChatGPT as more interesting than those devised by human teachers was in the minority, at slightly more than a quarter.

The percentages of participants who neither approved nor disapproved of the various capabilities of ChatGPT made up the lowest in terms of time and effort saving (16.6%) and the highest when it comes to accuracy, evaluation of students' higher-order thinking skills, and degree of interest in the questions generated by ChatGPT. The two latter aspects were also the benefits that were the most disagreed by the survey respondents, with each accounting for almost one in four.

Research Question 2: What are the challenges HUFLIT's lecturers of English may encounter regarding ChatGPT's competence in tests and assessment design?

Section 3 consists of a number of statements in which the participants had to express their opinions about the obstacles they encountered when utilizing ChatGPT in drafting exam questions and evaluative activities.

Table 2 highlights the challenges the lecturers in charge of various English-related subjects at HUFLIT experienced while adopting ChatGPT in their tests and assessment design process. The greatest concern shared among the lecturers was ChatGPT's inability to devise questions fulfilling their expectations without providing specific and appropriate prompts, with a massive 80% exhibiting their approval of this. There was also broad agreement among the surveyed participants on the imprecision of the questions created by the chatbot (around two-thirds), with the tendency of not matching students' linguistic competency not far behind, at 63.3%, followed by the limitation of the tool in devising questions to evaluate students' higher-order thinking skills since the questions produced this way proved to be a challenge for learners to have a full grasp of them. Just over half of the respondents were in agreement with ChatGPT's failure to provide picture cards or images when it comes to picture-related activities. As regards questions that are concerned with lower-order thinking skills, a significant percentage considered the questions dealing with this aspect to be rather repetitive and lacking in creativity.

Table 2. The challenges concerning the adoption of ChatGPT in designing English tests and assessment

<i>Statements</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>
Without specific and appropriate prompts, ChatGPT cannot generate questions up to lecturers' expectations.	<u>30%</u>	<u>50%</u>	10%	10%	0%
ChatGPT-produced questions to evaluate students' lower-order thinking skills are quite repetitive and lacking in creativity.	3.3%	43.3%	43.3%	10%	0%
Some corresponding answers to questions provided by ChatGPT are not precise.	<u>3.3%</u>	<u>63.3%</u>	30%	3.3%	0%
ChatGPT-produced questions to evaluate students' higher-order thinking skills are sometimes challenging for students to fully understand.	<u>3.3%</u>	<u>56.7%</u>	36.7%	0%	3.3%
ChatGPT-produced questions do not always match students' language levels.	<u>3.3%</u>	<u>60%</u>	23.3%	13.3%	0%
ChatGPT-produced questions cannot provide picture cards or images when it comes to picture-related activities.	13.3%	40%	40%	6.7%	0%

The next open-ended question presents other problems associated with the employment of ChatGPT in devising English tests and assessments. Ideas varied across lecturers; however, there were some concerns related to the input of prompts to ask ChatGPT to generate exam or test questions. Many of them emphasized the significance of writing appropriate, specific, and concise prompts that could convey the lecturers' demands in order to enhance the reliability of ChatGPT-produced questions as well as the need for adjustment and insertion of detailed prompts a number of times to create expected questions:

“Giving appropriate prompts so that ChatGPT can generate questions that match my expectations.”

“The test designer has to input very detailed instructions many times in order to get what he or she wants.”

“Without enough specific and concise prompts, ChatGPT will not be supportive and reliable for teachers to design tests.”

Three lecturers pointed out a limitation of ChatGPT in designing tests and assessments concerning the accuracy of answers provided by the chatbot and the level of difficulty of the questions that may not be well-suited to students:

“Some questions are too simple but some are too complex for students to figure out. Sometimes, it also provides wrong answers.”

“Sometimes the assessment is not precise.”

“ChatGPT cannot provide exact test and assessment for mix-classes.”

Another concern raised was the suitability of ChatGPT-generated questions to match students' levels and learning outcomes:

“In my opinion, student level is another problem associated with the adoption of ChatGPT in devising tests and assessment.”

“unsuitable level for all learners, not accurately access specific lesson goals”

“Whether the test items designed by ChatGPT match learning outcomes”

One lecturer expressed skepticism about the "reliability and validity" of the test devised by ChatGPT, while another affirmed the tool's inability to design a complete test but pointed out its potential to provide perfect ideas for test design:

“ChatGPT couldn't fully support us in designing the complete tests but its products can be our ideal suggestions when we don't have time.”

Two participants suggested that lecturers should spend time checking or revising ChatGPT-produced questions to guarantee their precision and appropriateness to students' linguistic levels, whereas one surveyed respondent attributed his or her problem to a shortage of "technical support" from the faculty in the utilization of ChatGPT for testing design purposes:

“It takes time to review, sometimes revise some questions because they are not suitable for the content.”

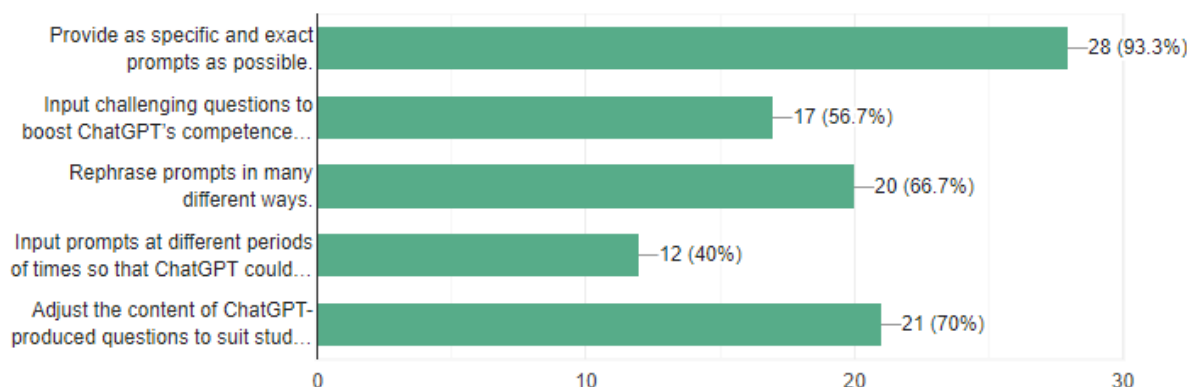
“We have to check both ChatGPT's questions and the answers to make sure that could be used for all students.”

Research Question 3: What can lecturers of English at HUFLIT do to enhance ChatGPT's capabilities in tests and assessment design?

The final section revolves around the HUFLIT lecturers' recommendations for enhancing ChatGPT's capabilities in the design of English tests and assessments.

It is apparent from Figure 3 that the most agreed method of enhancing ChatGPT's capabilities in devising English tests and assessment activities was the provision of as specific and exact prompts as possible (93.3%). Adjusting the content of ChatGPT-produced questions to suit students' English language competency was also seen as an effective approach, with a large majority of lecturers opting for it. Another method was to rephrase prompts in many different ways, which could contribute to the training of ChatGPT's versatility in accommodating users' requests. The remaining strategies that could also boost the chatbot's abilities involved inputting challenging questions and prompts at different periods of time, with respective figures being 56.7% and 40%.

Figure 3. Methods of Enhancing ChatGPT's capabilities in English tests and assessment design



When it comes to other approaches to improve ChatGPT's capabilities in designing English tests and assessments, some lecturers recommended paying attention to the quality of the prompts, placing an emphasis on providing sufficient information concerning students' competence levels, goals of the tests, and kinds of tests for the prompts so that the outcome or test items could adequately and precisely address their requests:

“Lecturers need to provide clear instructions of students’ levels, proficiency, and objectives of the tests.”

“Provide detailed requirements about the test, level, test type, etc.”

Apart from this, one lecturer stated that ChatGPT's capability in designing tests and assessments could be enhanced by inputting various prompts and challenging its comprehension and analysis by posing in-depth questions so that the chatbot can be trained on processing requirements in different ways:

“Put in a lot of prompts so that ChatGPT can learn from its history.”

“Question depth for ChatGPT”

Another interesting idea was to integrate an example that illustrates the outcome of the test into the prompt so that ChatGPT was more likely to generate a test that met lecturers' expectations:

“Give a sample of a result that you expect to receive from ChatGPT when giving a prompt.”

“Give it some examples”

One lecturer highly appreciated the chatbot for its suitability in creating formative assessments and advised teachers to solely utilize this AI-assisted tool for idea generation, which could help to reduce their reliance on the chatbot. Another lecturer mentioned the need for adjustment of ChatGPT-designed questions prior to distribution to students:

“I think it suits the formative assessment. Teachers should use it as a prompt for generating ideas, not too much depend on it.”

“Should adjust questions of tests before delivering them to students”

Two participants emphasized the incorporation of training focusing on instructing them to employ ChatGPT to design tests and assessments in an effective and appropriate manner:

"Provide teachers with specific guidances of how to design tests using ChatGPT."

"My skills in using ChatGPT is still limited, so I think I should take part in many training sessions on how to use ChatGPT for test design."

To foster ChatGPT in tests and assessment design, the other lecturers proposed the critical combination of ChatGPT-produced tests and those tests created by human teachers as well as other tools such as Grammarly:

"Combine human-designed tests with ChatGPT-generated tests"

"Combine Grammarly and other apps with ChatGPT"

Results of the interviews

Theme 1: Lecturers' evaluation of ChatGPT's capabilities in designing English tests and assessment

Potential to generate a variety of test types

All of the interviewees held the belief that ChatGPT was competent in generating a mixed diversity of test formats and quizzes, ranging from multiple choice, True/False, gap-filling, to long or short answers, open or close-ended questions, and so on across a range of skills and disciplines, which significantly led to gains in time efficiency and effort reduction in test designing process. Among these, one lecturer emphasized the tool's usefulness in aiding lecturers with both formative and summative tests:

"I think when ChatGPT was invented, it was programmed with the theories of language testing, so I think it's helpful for teachers to design tests, even the quizzes. We can use them to ... uhm... kind of... formative or even the summative tests. Uhm so... I have used it to design the multiple choice questions, even the open-ended, and close-ended questions."

"I used to utilize ChatGPT to design the reading test, and ChatGPT's very useful to help me to design the kind of tasks for example true or false, multiple choice, filling the blanks, short answers, long answers, and writing... It's very excellent in designing the writing topics for students."

"I think there are some benefits when we adopt ChatGPT in designing tests. Firstly, it is fast. By just typing a comment, ChatGPT will create a list of test sentences, so it saves a lot of time... and you can ask ChatGPT to create different types of questions, so it's various... The question types are various, so it really enhances the convenience. It's really handy and very convenient for the teachers... so it saves us a lot of efforts in designing tests."

An effective source of idea generation for testing

Some of the lecturers pointed out ChatGPT's potential to generate outlines or suggestions for various test types with great speed, efficiency, and creativity. The novelty of ChatGPT was

demonstrated in its ability to produce a wide range of activities and tasks that resemble real-life situations, thus stimulating students' interest and engagement in the tasks while simultaneously boosting the efficiency of the assessment process. The two interviewees showed their appreciation of ChatGPT's customization capability, tailoring tests and other forms of evaluation to lecturers' requirements so as to accurately assess students' academic progress:

“Moreover, one of the standout features of ChatGPT is its ability to customize questions to match different educational needs, whether teachers require simpler or more challenging tasks, so ChatGPT can address the complexity of these questions. Last but not least, ChatGPT can produce creative and varied task types that might add diversity to assessment. Let me give you an example. Instead of requiring students to make a conversation in pairs for the final test, I was stumped to make a podcast, design a poster, and make a presentation or even make an interview scenario. I think all of them might be more engaging to students, so this variety not only makes assessment more effective but also more engaging to students.”

Theme 2: Lecturers' evaluation of challenges encountered while adopting ChatGPT in English tests and assessment design

Obstacles in generating detailed and higher-order thinking questions

With respect to the challenges associated with the employment of ChatGPT in designing English tests and assessments, two of the interviewed lecturers asserted that ChatGPT could struggle with producing questions that test students' higher-order thinking skills, such as critical thinking and problem-solving since the assessment of these skills was challenging for this AI-assisted tool. They added that ChatGPT was likely to generate critical questions to evaluate students in this respect, but their questions should have been more advanced. Moreover, ChatGPT-produced questions were not as specific as expected, which deterred them from entirely relying on the tool for designing exam questions:

“Actually, it depends on the content that the teachers want to ask the students to apply these kinds of skills because to assess the critical thinking skills of students is kind of difficult for ChatGPT to design, I think so..., so that's the reason why we just use ChatGPT to just kind of the prompt or I say the hint to design the kinds of questions, not depend totally on the content of the questions designed by ChatGPT.”

“As I said before, I designed the tests, even the quizzes and... I think ChatGPT is just used as a prompt for me to know the kinds of questions I want to ask students, not totally depend the content of ChatGPT because it's very ... I can see that ChatGPT's questions are very general, not go detailed, so that's the reason why ChatGPT will be the frame, you know, and I use that frame to redesign the content...”

Lack of accuracy and up-to-date information

Another obstacle facing the lecturers in utilizing ChatGPT as a tool for tests and assessment design is its infrequent provision of inaccurate responses, leading to the consumption of time to recheck the accuracy of the test items. Producing questions that require an up-to-date source of knowledge is also an obstacle for ChatGPT to deal with:

“... but the most thing I’m worried that if they’re tested, answers are not really correct for my students. Yeah so whenever I use ChatGPT to design a test, I have to waste time to read it again and again, again and again... to make sure everything is ok for the task...”

“Talk about the reliability, so as I have checked ChatGPT for the reading test, I think there are still some mistakes inside in terms of the main idea or the details... yeah the accuracy, and the way it creates a set of questions... maybe it... sometimes it overlapped.

“When you ask ChatGPT what is happening now, right now, so it maybe provide you with the wrong information; it could provide you with the information but it’s not really correct ...”

Unparaphrased or inappropriate questions

Concerning the quality of the questions, a few lecturers revealed ChatGPT’s weakness in its incapacity to paraphrase the information in reading passages or draft multiple choice exercises to generate questions that were appropriate to students’ linguistic competence, which also entailed a large amount of time for reassessment and refinement to guarantee a perfect match in terms of suitability and pertinence between the output and the learning objectives:

“There’s a limitation. For example, I want to create a reading exercise which consists of 10 True/False sentences; however, there are some sentences that were not paraphrased, just simply citing the sentences in the reading passage, which means they’re too simple. Or sometimes, when I give a multiple choice exercise like checking vocabulary, ChatGPT gave options that were beyond the students’ language level... so we have to review and readjust... so it’ll take time, and I think that’s a problem because it can’t completely understand our requirements to design a test which is well suited to our objectives...”

“Well, one of the main challenges I can recognize is... is that I have encountered with using ChatGPT is ensuring the relevance and accuracy of the content it generates. Usually the questions generated by ChatGPT might not perfectly align with specific lesson objectives or course learning outcomes. Let me give you an example. For example, I have just finished designing a final test for non-English majored students. I mean I had to design multiple choice questions for vocab, grammar, and reading skills. So for multiple choice questions, I have to think of... I ask ChatGPT to design 4 options, so it’s hard for ChatGPT to choose the correct options that are aligned with the lessons students have already studied in class... so to deal with this, I have to review and refine the AI output. This might involve adjusting the phrasing of questions, checking for appropriateness, and ensuring that each question serves the learning outcome of the course as well as the lesson objectives.”

The mismatch between questions and students’ language levels

The interview also revealed that the questions suggested by ChatGPT occasionally mismatched students’ linguistic competency, which was reflected in its generation of identical questions that made it difficult or impossible for lecturers to categorize students according to their levels:

“In my opinion, so the questions are...uhm... so for example, I can use the same set of ideas, but I asked ChatGPT to create different levels. And when I compared the questions

for different levels, I found that it's ok but not really helpful or has a really distinct difference between ... maybe from intermediate and advanced levels, sometimes... so for the beginners, that's ok, but for higher levels, it's kind of similar."

Theme 3: Methods of enhancing ChatGPT's capabilities to design English tests and other forms of assessment activities:

From the lecturers' perspectives, a number of measures could be implemented to foster ChatGPT's testing design competence, among which three key approaches stood out.

Question re-evaluation and redesign

First and foremost, all of the lecturers shared the same viewpoint that ChatGPT should only be utilized as an idea generator for testing or a reference tool that lecturers should refer to when they embark on the design of a test, an exam, or a task for assessment. They thought that subsequent to ChatGPT drafting questions or suggesting ideas for testing activities, lecturers should assume responsibility for double-checking the precision and appropriateness of the questions as well as the provided answers so that readjustments or refinements could be made to the content of the questions that would be used later on. They placed a great emphasis on lecturers' critical sense to select, adapt, and redesign questions so as to satisfy fundamental requirements of a test's learning outcomes and students' levels of language:

"Uhm I think ChatGPT will be an effective tool for us to save time only, and sometimes it will raise some ideas for us to do the questions, and through that maybe we can base on the prompts or the hints from the ChatGPT, so we can know the next step what we will do and what we correct the question so that it goes straight to the point of the lesson we want to check and recheck the understanding of the students..."

"I think we should double-check and revise the questions. If we find a big problem in the questions, we have to read the results again and check ..."

"If after I read the products from AI, uh from ChatGPT, so I think all of that's ok and no queries or no questions, so I'll use it, and if I find something not very reliable or something outdated I need to check, so I will use another AI app for double check."

Training ChatGPT through the input of prompts

Another solution mentioned by the lecturers attending the interview was training prompts, highlighting that the prompts to be fed into ChatGPT should be written in the most careful and specific manner, incorporating adequate information such as students' levels of linguistic proficiency, learning objectives, test types, and expected outcomes, etc... Some of them pointed out that the prompts should be made "recursive", which involved the repetition of different rephrased prompts acting as input so as for ChatGPT to process, analyze, and handle the information in the prompts in many ways, and that lecturers had better provide "feedback" for ChatGPT under the form of new prompts so that this AI tool could learn from the information to improve its performance and efficiency, from which it may be geared towards goal achievement of effective testing design. The preparation of prompts for ChatGPT, from one lecturer's point of view, should be a step-by-step process in which ChatGPT was trained to tackle every aspect of the prompts in the most comprehensive manner so as to generate the most

satisfactory output which could objectively and accurately evaluate students' academic performance:

“There are two things that need to be taken into consideration. First of all is considering the prompts. I believe that every prompt we need should be included 4 main parts. The first one is the context. I mean that we need to include the background information or the scenario that we set the stage for the questions. The second part is instructions that means the directions that we need to guide the students how to approach and solve the questions. The next part is data. I mean that we have to supply all the facts, the figures, the information, or even sometimes we add a pdf file of the coursebook for ChatGPT in order to ensure that everything needed is readily accessible without extra resources. Last but not least, that is the result, requirements, that mean what we expect to receive from ChatGPT. The second thing is recursive prompt. As usual, when ChatGPT gives me the first result, it's not satisfied with my needs. That's why we need to add more prompts, more detailed prompts ... and it seems to be a process; it includes many steps in order that ChatGPT can give me a complete and a relevant result. And the last one is the refine the output. Refine the output it means that we have to edit for the language, the grammar, the structure, the content, also the flow of the test, I mean so.”

“I think we have to continuously give ChatGPT guidance so as to train it to the level we want. We have to give it more specific guidelines, and then some feedback. For example, when I give it requirements to design a test, if I'm not satisfied with the output for the first time, I'll give it feedback... and I see it has made some improvements, like if I want the question 2 to be corrected in some respects, I'll give it feedback... and I see ChatGPT has improved it, corrected it, and I continuously re-evaluate the question and provide it with some more feedback ... I think there should be training and clear guidelines so that ChatGPT can meet the requirements we expect.”

Training lecturers on how to employ ChatGPT for tests and assessment design

Two lecturers stated that there should be training sessions providing lecturers with meticulous instructions or guidance on how to take the best advantage of ChatGPT for test design, specifying that either the Faculty of Foreign Languages should be held responsible for holding such training courses or lecturers should be engaged in a community whose aim is to share knowledge and experiences as well as offering mutual support so as to enhance their self-assurance in devising tests and assessment with the aid of ChatGPT:

“I think that first of all the organizations should have ... like ... the orientation to instruct teachers how to use them, how to use AI or ChatGPT in particular, in a more effective way because usually teachers nowadays just find it out themselves; they don't have any specific guidelines to utilize ChatGPT in designing tests.”

“Teachers also need guidelines. If we have a community for sharing knowledge and sharing the specific or effective prompts for using, I think that it's a good opportunity for teachers to improve themselves in using AI or ChatGPT...”

Discussion

The study aims to examine the capabilities of ChatGPT in assisting HUFLIT lecturers of English in designing tests and other types of assessment:

Research question 1: What are the potential capabilities of ChatGPT in the design of tests and assessments from the standpoint of lecturers of English at HUFLIT?

The main findings of the research suggest that ChatGPT possesses an excellent capability for quickly generating a vast and impressive variety of questions of varying kinds matching given prompts and pertinent to lecturers' requirements, which is not only time-saving but also energy efficient and assists lecturers in developing their test design competency through serving as a source of suggestions for ideas and structured formats for devising tests and assessment activities. ChatGPT was also highly valued for its provision of very detailed instructions that effectively facilitated the implementation of in-class activities. This finding is in accordance with that of the study conducted by Rasul et al. (2023) who also investigated the potentialities of ChatGPT in designing tests and assessment in his research. The possible explanation for this may lie in the fact that ChatGPT has been specifically trained on massive language models and patterns, which helps it immediately respond to requests demanding linguistic knowledge with ease and speed. Aside from this, it was found that its originality in recommending engaging scenarios or real-life situations aroused students' interest in the tasks, therefore enormously benefiting the assessment process. This result ties well with those reported by Rudolph et al. (2023) and Kolade et al. (2024), who acknowledged the chatbot's capacity to create diverse, authentic scenarios that are potentially advantageous to students in terms of communicative and higher-order thinking skills.

Research question 2: What are the challenges HUFLIT's lecturers of English may encounter regarding ChatGPT's competence in tests and assessment design?

The results from the questionnaire and the interview indicate that the greatest challenge associated with the adoption of ChatGPT in designing English tests and assessments was its inability to draft questions that match the expectations of lecturers if the prompts failed to be sufficiently specific and appropriate. Inaccuracy, mismatch with students' language capacity, failure in generating questions that are specific, updated, less repetitive, and more stimulating and likely to evaluate students' higher-order thinking skills effectively as well as picture-related activities were other obvious shortcomings, which may hinder lecturers from designing reliable and valid tests or assessment tasks. These findings are in alignment with those of Abas et al.'s (2023), Gonsalves (2023), Kostka & Toncelli (2023), Rudolph et al.'s (2023), and Zaiarna et al.'s (2024) research. These limitations exist perhaps due to ChatGPT's inadequate understanding of the prompts given or its shortage of profound specialized knowledge and critical ability to handle lecturers' requirements. After all, ChatGPT was only an AI assistant tool equipped with language training, so it could not supersede the crucial role of human lecturers.

Research question 3: What can lecturers of English at HUFLIT do to enhance ChatGPT's capabilities in tests and assessment design?

Methods to enhance the capabilities of ChatGPT vary, but the most notable ones emerging from the research findings were the training of ChatGPT through the provision of prompts, the reassessment and readjustment of inappropriate questions generated by the chatbot, as well as the coaching of lecturers to adopt ChatGPT as an effective tool for tests design. The former approach involved the meticulous drafting of prompts, which consisted of detailed and exact information on the scenarios, instructions, students' proficiency levels, kinds of tests, examples of expected learning outcomes, and so on, to make sure that the finished product was consistent with lecturers' expectations. Apart from the careful preparation for the input, the repetition of prompts using different wording to convey similar instructions was also of significant importance in improving the efficacy of ChatGPT in generating exam questions or test items. However, the coaching of ChatGPT would not be efficient if there was no continuous feedback about its initial outputs, which means lecturers were supposed to provide comments on the performance of ChatGPT by means of raising in-depth questions to train its critical thinking ability in coping with various requests ranging from simple to complex ones. The latter approach underscored the need for revision, re-evaluation, and refinement of ChatGPT-produced questions if they were found to be unsuitable or imprecise in terms of content or language use. When it comes to devising questions to assess students' higher-order thinking skills, content double-checking should be carried out in order to guarantee the reliability of the questions produced by ChatGPT, which concurs with the findings of Anderson et al.'s (2001) study. The final approach required support from the Faculty of Foreign Languages or the community whose commitment was to offer guidelines or assistance to those wishing to accumulate knowledge and experience in the effective employment of ChatGPT for testing design purposes. This result ties well with the findings of Zaiarna et al.'s (2024) study, when an emphasis was also placed on the advantages of providing guidance or practices to instructors prior to the adoption of ChatGPT in test and assessment design.

Conclusion

In conclusion, the potential capabilities of ChatGPT in aiding lecturers of English at HUFLIT with the design of tests and other forms of assessment have been evaluated in this research paper with the employment of a mixed methods approach. The findings indicate that ChatGPT is a promising AI assistant tool for test design on account of its extraordinary versatility in generating a richer diversity of exam questions, test items, or tasks in accordance with lecturers' demands in a quicker and more detailed manner compared to those drafted by human teachers. Those who take responsibility for designing tests and assessments also substantially benefit from the adoption of the chatbot when referring to ChatGPT as a source of ideas and suggestions for testing. Nevertheless, the chatbot manifests some weaknesses regarding inexactitude, inappropriacy in the content or linguistic usage, the mismatch between the output and learners' language capacity, its failure to produce more specific, more interesting, up-to-date, and less repetitive questions to assess students of distinct levels, questions concerning the use higher-order thinking skills, as well as those dealing with picture activities. It is important, therefore, to train ChatGPT by inputting more precise and detailed prompts which also need to be recursive and paraphrased to express the same ideas at different periods of time. As for lecturers,

they had better critically reassess the precision and appropriateness of the questions generated by ChatGPT in order to be able to make proper readjustments for obtaining the best quality tests or evaluative tasks. Additionally, more training sessions provided by the Faculty of Foreign Languages that instruct lecturers to employ the chatbot for the purpose of designing tests, coupled with lecturers' active engagement in a knowledge-sharing community, should be taken into account so as to maximize the effectiveness of ChatGPT's capabilities in this respect.

Limitations

There are a number of shortcomings regarding several aspects of the research that should not be overlooked. First and foremost, the small sample size involved in the study (only 30 lecturers) could exert an impact on the study, therefore reducing the generalizability and reliability of the findings. Another limitation worth mentioning is although the research employed the quantitative and qualitative approach to reinforce the validity of the data, if tests and assessments of various types and subjects generated utilizing ChatGPT had been collected for analysis and evaluation, more specific information related to the competencies of the chatbot in designing exams and tests would have been able to be obtained, which further revealed fascinating results to benefit those concerned.

Recommendations for further studies

Future studies should include a larger number of participants so as to enhance the precision of the results, thus helping to strengthen the research's representativeness. If an examination of ChatGPT's capabilities to devise tests and assessments was carried out on a particular English subject of different domains (skills, theory, major, etc.), there would be more insightful interpretations that could contribute to the understanding of the chatbot's competency, from which practical measures might be taken to optimize its potential and minimize its downsides.

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Biodata

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Investigating Learners' Perspectives on ELSA Speak Integration to Enhance Autonomy and Oral Language Proficiency in English Classes

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ABSTRACT

The study highlights the integration of the ELSA Speak application, regarded as a MALL – Mobile-Assisted Language Learning tool, in a general English course for fostering learner autonomy. Initially, the application is built wholly based on the speech recognition function, which allows it to receive oral inputs from users and provide them with feedback. This paper employs qualitative and quantitative methods to examine the app's potential to bolster learner autonomy and how learners' oral language proficiency is related to their degree of autonomy. The participants are 50 sophomores from Sai Gon University whose majors are not English Linguistics. The findings highlight the significance of providing an outstanding self-access learning space, a learning environment allowing learners to control their learning process and deliver critical reflections. These findings also emphasize the playfulness of the experience and the potential to eliminate limited opportunities to find conversation partners and negative feelings of social judgment. All of these elements forge great motivation and stimulus, which greatly enhance the degree of autonomy. Consequently, participants with greater autonomy also demonstrate better speaking competence.

Keywords: ELSA Speak, speaking skills, autonomy, perceptions

Introduction

In the modern era, English serves as a means of communication worldwide and it has eventually become a universal language (Kholis, 2021). Among the four language skills, a language speaker must undergo deliberate and targeted training in speaking skills in order to develop into a highly adept communicator, demonstrating mastery over the four fundamental linguistic competencies, namely listening, speaking, reading, and listening (Kadamovna, 2019). In fact, with the innovative advancement of technology, learners can find various ways to become proficient at speaking foreign languages, especially English. A justification for this could be

that English learners may take full advantage of numerous applications and online platforms that offer a number of means to facilitate practicing and developing English. With the outbreak of English learning applications, it is unexceptional for application developers to integrate Artificial Intelligence (AI) technology as a practical tool for human support. AI represents a step toward developing computers, robots, or programs that function intelligently, mimicking human behavior (McCarthy, 2007). One of the prevalent cases of adopting AI to support the enhancement of English-speaking skills is the ELSA Speak (English Language Speech Assistant) application. ELSA Speak is a sophisticated English pronunciation application specifically designed to assist individuals in articulating the language with precision, enabling them to communicate clearly and confidently (Taay, 2021). In fact, adopting ELSA in the learning process is not a novel practice; however, with the introduction of the new feature so-called ELSA AI, allowing learners to make conversations with a language model chatbot in a real-time environment, spaces for investigations in terms of usefulness and practicality of such application are opened. Specifically, in the Vietnamese educational context, especially at the tertiary level, the employment of ELSA Speak is still uncommon.

Literature review

ELSA Speak

Cited from ELSA Corp, by leveraging advanced technology software tools, the ELSA Speak application integrates artificial intelligence (AI) for speech recognition, which is designed to enhance English learning within the educational field. This application comes highly recommended for aiding students in refining their speaking abilities, as it offers a range of advanced features and resources, a tailored and well-tested curriculum, an online dictionary, tools for evaluating pronunciation and intonation, as well as free assessment exams, making it a comprehensive solution for language improvement. Another aspect that distinguishes this application is its use of Automatic Speech Recognition Technology (ASR). This feature aims to transform the lexical content of human speech into a format that can be processed by a computer (Yu, 2012). The application then promptly offers corrections for any errors detected. Furthermore, the application renders learning English enjoyable and memorable by presenting an array of themes that can be customized to meet the users' specific preferences and training requirements. ELSA Speak additionally offers a spectrum of learning levels, ranging from beginner to advanced ones, while effectively evaluating the accuracy of the user's speech. Learners are allowed to raise their thoughts openly and pose inquiries regarding the subjects under discussion. (Hanna *et al.*, 2022). In addition, with the recent updates, the application also integrates the new feature called ELSA AI, which provides learners with opportunities to engender conversations with the language model chatbot in numerous scenarios and colloquial settings.

Aspects related to oral proficiency development

Newton and Nation (2020) mentioned the five principles to create spaces for both aural and oral proficiency development, including focusing on meaningful and relevant language, upholding interest through a number of activities, avoiding overwhelming learners with too much

language, offering various understandable input and forging a friendly learning environment. Firstly, the author indicated that the primary emphasis should be on teaching language that learners can readily apply to their needs, rather than delving excessively into grammar explanations or introducing vocabulary that is not immediately useful. Moreover, repetition of language engagement and learner involvement are also emphasized. Secondly, activities should be brief and diverse to keep learners engaged, actively involving them in responding to or utilizing the language. Thirdly, teachers often fall into the trap of introducing an overwhelming amount of new language while not offering learners enough opportunities to fully grasp it; therefore, a straightforward principle to keep in mind is “learn a little, use a lot.” The authors also mentioned that in order to create spaces for speaking skills development, learners should be engaged in acquiring vocabulary through listening and practical activities before they enhance their understanding by using the words in structured speaking exercises. If speaking is emphasized too soon, learners may be more prone to transfer phonological patterns from their first language and focus on mechanical challenges. Ultimately, Yashima (2002) emphasized that there is substantial evidence indicating that anxiety affects learners' willingness to engage in communication in a second language. Therefore, it is crucial that learners must be engaged in low-stress learning experiences.

Pronunciation is also another vital factor affecting the oral competency of language learners since the capacity to speak is heavily reliant on accurate pronunciation. Having good pronunciation in a language enhances normal communication, especially regarding intelligibility (Derwing & Munro, 2005). Another strong piece of evidence underscores the necessity for English learners to practice the pronunciation of new vocabulary they acquire. Pronunciation is a crucial micro skill in communication, as poor pronunciation can hinder effective communication (Vasbieva *et al.*, 2016). However, developing a consistent pronunciation in a new language serves more than just that purpose. An essential mechanism in working memory, known as the phonological loop, plays a significant role. The phonological loop involves the brain repetitively reciting a word or phrase to retain it in working memory or facilitate its transition into long-term memory. If learners lack a consistent pronunciation for a word, it cannot easily be stored in long-term memory, as it cannot be maintained in the phonological loop (Ellis & Beaton, 1993; Baddeley *et al.*, 1998; Singleton, 1999). According to Jumrina (2013), pronunciation pertains to the phonetic representation of sound symbols described in alphabetical form. The alphabet comprises consonants and vowels, which differ in their sounds and symbols. As Fraenkel (1984) noted, it is widely recognized that there are two phases in acquiring language pronunciation. The first is the receptive/listening stage, where learners develop the ability to distinguish the sounds and patterns that are important in the language. This implies that the initial stage of learning pronunciation occurs through listening to the sounds and patterns of the language. The second phase is the productive/speaking stage, during which learners practice producing the sounds they have previously learned to recognize auditorily.

Lastly, fluency is also one of the factors that learners should consider if they want to improve their speaking skills. Skehan (1998) defined fluency as the rate of speech production and the count of hesitations. Newton and Nation (2010) mentioned the three conditions in which learners can foster their fluency. Firstly, learners' focus is on conveying a message and is

influenced by the pressures of "real-time" communication. Secondly, learners engage with primarily familiar subjects and forms of discourse, utilizing vocabulary and structures they already know. Lastly, learners should aim to speak and comprehend more quickly, reduce their hesitations, and utilize larger, pre-planned segments of language compared to their typical usage.

Consequently, ELSA Speak was considered a useful tool in assisting pronunciation and fluency practice; thereby, learners could obtain a better level in their speaking skills. Certain research clarified the positive aspects of applying ELSA Speak in oral proficiency development (Taqy, 2021; Indriyani *et al.*, 2024; Sholekhah *et al.*, 2023).

Learner autonomy

Learner autonomy is most frequently described as the capacity of learners to take responsibility for their own learning (Holec, 1981; Little, 1990). Benson (2011) indicated two questions to assess the effectiveness of any practice aimed at promoting autonomy. The first is 'How does this practice help learners take greater control over their learning?', and the second is "How does the practice improve language learning?". However, the development of a learner's ability for autonomy does not occur independently, but rather through social interactions (Murray, 2014). Little (2000a) also indicated that the growth of autonomy is an outcome of social interaction. Without social interaction in language learning, the chances of developing autonomy and achieving any meaningful level of language proficiency are significantly reduced. Little highlighted the nature of language learning is always mediated through social interaction. In terms of the mediating factors, Hyland (2004) listed some aspects, including time management, motivation, and interest, limited chances to find conversations, negative feelings of social judgment, and face protection. Moreover, motivation enhances language learners' self-confidence. It also encourages individuals to pursue learning the target language, enjoy the process, and participate in authentic communication; thereby, learner autonomy can be formed during the learning process (Aeni, 2021; Karim *et al.*, 2023).

Research Questions

Therefore, this paper aims to investigate two research questions including:

1. Which aspects of oral language proficiency development can ELSA Speak provide to English learners?
2. What are the students' perceptions on the integration of ELSA Speak to help them develop learner autonomy?

Methods

Pedagogical Setting & Participants

We recruited 50 students from Sai Gon University, whose majors varied including business, information technology, high school pedagogy, etc... These students were chosen due to their enrollment in English-speaking courses at a comparable level, as reflected by their English entrance placement test results. Prior to participating in the study, we obtained their informed

consent, ensuring they participated voluntarily.

Design of the Study

The research design of this study follows a sequential mixed methods approach, where the analysis of one dataset guides and informs the analysis of the next dataset. (Creswell, 2014).

Data collection & analysis

At the commencement of the course, 50 students were gathered and given comprehensive training on how to effectively integrate ELSA Speak into their learning process. Moreover, they were required to use the application for at least one month before we collected the data from the participants. During the study's first phase, participants completed a questionnaire addressing their experiences using the ELSA Speak application. In the second phase, participants engaged in reflective tasks to provide additional insights on learners' perceptions towards the ELSA Speak. We chose to use the reflective tasks instead of interviews as we had a limited allotment of time, yet we still wanted to collect a vast set of data for a profound understanding of the examined integration of the ELSA Speak application. In our case, the statistical analysis of the survey data addressed the first research question: 'Which aspects of oral language proficiency development can ELSA Speak provide to English learners?'. With the results highlighting the role of ELSA Speak in equipping learners with meaningful input and correct articulation of sounds as well as improving fluency, we then analyzed the learners' response to the reflection to answer the second research question: 'What are the students' perceptions on the integration of ELSA Speak to help them develop learner autonomy?'. The questionnaire was initially translated into Vietnamese to enhance the study's validity, ensuring that all participants fully understood the content. A pilot test was also conducted with two English lecturers to check for spelling, meaning, and translation errors. For the reflective tasks, participants provided their responses in Vietnamese so they could express their thoughts freely without language barriers. To further ensure the validity and reliability of the qualitative data, the English-translated findings were peer-reviewed and cross-checked by members of the research team. For the quantitative part, SPSS version 26 was used to gather and analyze data of 50 participants from the questionnaire. For the qualitative part, the data was analyzed inductively (Corbin & Strauss, 2014) through a recursive process of open, axial, and selective coding.

Results/Findings and Discussion

Questionnaire analysis

The aspects of oral language proficiency development that ELSA Speak can provide to English learners

Learners' opinions regarding the ELSA Speak app in language learning were evaluated through a questionnaire, with a focus on how the app contributed to improving oral language proficiency. The participants' responses revealed that students perceive the ELSA Speak application as beneficial in the following aspects of speaking skills.

Table 1. Learners' answers to the questionnaire

No.	Statement (N=50; Mean = 4.19)	Mean (4.19)	Std. Deviation
1	I think the contents provided by ELSA Speak are meaningful and relevant.	4.24	0.76
2	I think the contents provided by ELSA Speak are of interest, too.	4.28	0.72
3	I think the contents provided by ELSA Speak are not overloading.	4.16	0.84
4	I think ELSA Speak provides me with plenty of comprehensible input.	4.32	0.68
5	ELSA Speak (especially the ELSA AI function) provides me with a friendly, safe learning environment.	4.30	0.70
6	ELSA Speak (especially the ELSA AI function) enhances my self-confidence.	4.12	0.88
7	I find the ELSA Speak's instruction useful in terms of individual sound articulation.	4.46	0.54
8	I find the ELSA Speak's instruction useful in terms of sound distinction.	4.28	0.72
9	I find the ELSA Speak's instruction useful in terms of stress and intonation.	4.18	0.82
10	I think the experience with ELSA Speak (especially ELSA AI) involves processing language in real-time.	4.20	0.80
11	I think my experience with ELSA Speak (especially ELSA AI) involves language items that are within my previous experience.	3.90	1.10
12	The experience with ELSA Speak (especially ELSA AI) encourages me to perform at a higher-than-normal level.	3.94	1.06

Table 1 highlights learners' perceptions of the oral language proficiency development that ELSA Speak offers to English learners. Overall, users found the app helpful in various aspects of speaking proficiency, with an average rating of $M=4.19$, surpassing 4 and approaching 5 (strongly agree). This suggests that learners appreciated ELSA Speak's valuable support in enhancing their speaking skills. Specifically, student users acknowledged that the app was highly useful for individual sound articulation, sound distinction, and stress and intonation, with mean scores of $M=4.46$, $M=4.28$, and $M=4.18$, respectively. Participants noted that ELSA Speak provided ample comprehensible input ($M=4.32$) and created a friendly, safe learning environment ($M=4.30$).

The findings also reflected the users' positive views on the content offered by ELSA Speak. They strongly agreed that the app delivered meaningful and engaging information without overwhelming them, with mean scores exceeding 4.0. Additionally, learners indicated that ELSA Speak's AI function boosted their confidence ($M=4.12$) and encouraged better performance ($M=3.94$). Finally, users reported that ELSA Speak offered practical and authentic information, further contributing to a positive learning experience ($M=4.20$ and $M=3.90$)

Despite the different research methods used, the findings were in line with previous studies to

reveal positive aspects of ELSA Speak in oral practice (Taqy, 2021; Indriyani *et al.*, 2024; Sholekhah *et al.*, 2023). The results underscored the Importance of high-quality content design, effective pedagogical and instructional strategies, gamified learning features, automatic voice recognition technology, a safe learning environment, and personalized digital feedback. The study suggested that ELSA Speak held significant potential for aiding students in enhancing their pronunciation and speaking proficiency. It is noteworthy that the findings were also in line with the study of Hoang & Le (2023), as they mentioned that one possible reason for learners' speaking skills improvement may be that conversational chatbots provide a limited but corrective set of responses, which allows students to control the conversation flow more easily than with human conversation partners. This helps learners develop their English-speaking skills in a safe and supportive environment provided by chatbot AI.

Reflective tasks analysis

Students' perceptions obtained from the reflection sessions were synthesized to support the findings for the second research question. Therefore, the following themes were identified: 1) the effectiveness of ELSA Speak regarding the control of learners over their learning process, 2) the impacts of ELSA Speak in terms of the emotional dimension, 3) the influences of ELSA Speak regarding the social dimension. Diagram 1 shows a thematic map illustrating the themes and key findings of the reflections.

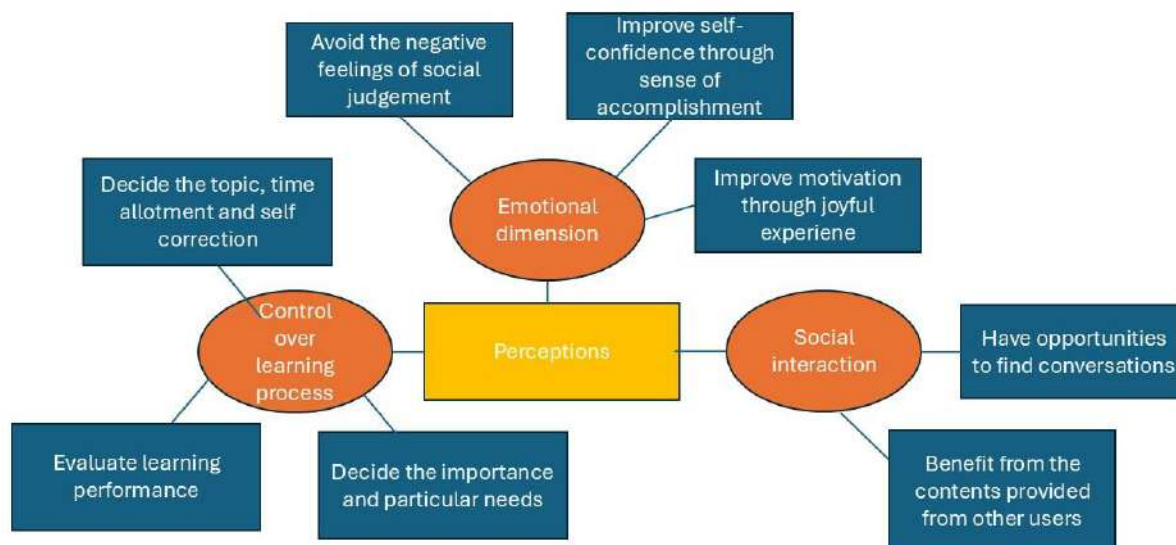


Diagram 1: Students' perceptions on the implementation of ELSA Speak in fostering autonomy

The diagram shows that ELSA Speak facilitates learner autonomy in terms of control over the learning process. In this case, students are allowed to make decisions on their own time management, favored learning topics, and self-correction. Moreover, they are allowed to self-evaluate and pick the learning content that meets their learning needs. Secondly, regarding the emotional dimension, learners are eager to engage in the learning process as they are eligible to get rid of social judgment as well as develop self-confidence and motivation. Lastly, in terms of social interaction, learners have various opportunities to practice and have conversations

with the AI chatbot integrated into the application. Moreover, they are allowed to learn from other users' pre-set of learning materials, which in this case can be seen as a mode of tandem learning.

Apart from quantitative data, the qualitative data provided insights into learners' viewpoints on how ELSA Speak supports learner autonomy. The reflective task results aligned with Aeni *et al.* (2021) and Karim *et al.* (2023) to confirm that the ELSA tool motivated users to engage in speaking activities in order to correct their pronunciation, intonation, and fluency, which gradually boosted learners' motivation. While these results mostly emphasized the learning process and the social interaction through the implementation – mainly the first stage to engage and motivate learners, the present study aimed at exploring further perceptions of self-study abilities. This research explored learners' emotional responses, highlighting how prolonged use of ELSA Speak increased confidence and helped reduce negative feelings, which offers a new aspect in this field.

Conclusion

Valuable findings

In conclusion, the research findings shed light on two primary aspects: the factors that ELSA Speak can provide English learners for oral language proficiency development and students' perceptions of the integration of such an application to help them develop learner autonomy.

Regarding the first aspect, the features integrated into the ELSA Speak provide spaces for English speaking competencies as they align with the aspects that facilitate the learning process in terms of three dimensions: linguistic materials, pronunciation, and fluency. As can be inferred from the findings, we highlight that the contents provided by ELSA Speak are meaningful and of learners' interest and do not overwhelm them with overloading knowledge. Moreover, such features play a vital role in encouraging learners to develop proper sound articulation, stress, and intonation. ELSA Speak also plays a great role in developing fluency. Therefore, we can assume that ELSA Speak greatly facilitates learners' improvement of speaking skills.

Regarding the second aspect, learners forge a positive attitude towards the implementation of ELSA Speak, which fosters learners' autonomy. The application's features fit in well with numerous dimensions, demonstrating the core factors that encourage learners to develop their autonomous learning.

One highlighted implication could be that English teachers should integrate the ELSA Speak within the English-speaking course with the interference of teachers' guidance and peers' interaction in order to guarantee social interaction, which is the core value in the language learning process. Even though the application seems to ideally meet the factors for both oral competency development and autonomy fostering, we need to admit that the learning process involved with the AI chatbot generally lacks the authenticity that face-to-face interactions hold. However, students would still be able to develop both English oral proficiency and foster their own autonomy in the learning process. To explain this, one possible clarification can be that learners, in the era of technology, acquire a high level of technology self-efficacy, and they agree that the excitement provided by technological use in language learning allows them to be

eager to learn English more intentionally and therefore be able to avoid a number of mistakes in terms of pronunciation and grammatical points. On top of this, learners can also learn several vocabulary and expressions that they can apply in their daily communication (Nguyen & Pham, 2022; Pham *et al.*, 2024). Therefore, we can infer that despite the lack of authentic communication with the AI chatbot of ELSA Speak, students can still be able to develop their English oral proficiency as they develop positive attitudes over the use of technology and excitement in applying what they learn in real-life contexts.

One greatest limitation we need to mention is that the expense of upgrading accounts for extra features, along with AI's limitations on specific topics, can limit the quality of conversational content. In the end, the app's effectiveness in improving the speaking skills of learners still heavily relies on the user's input.

Limitations

The greatest limitation of this research paper is the small-scale sample (only 50 participants). Moreover, the research takes place in Ho Chi Minh City, where learners have a high level of language competence and are well-prepared with numerous effective learning strategies (both metacognitive and cognitive). Therefore, the findings of this research paper might not be ideally generalized and applicable to all students throughout the nation. The call for further research with a larger scale and great diversity of participants in terms of their level of proficiency is highly recommended.

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Utilizing ChatGPT in checking academic writing for postgraduate students

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ABSTRACT

Although artificial intelligence has long been controversial, there is no doubt about its enormous impact on language education. This study investigates the potential utility of ChatGPT in assisting postgraduate students enrolled in academic writing courses at a public university in Southeast Asia in terms of grammar, vocabulary, coherence, and cohesiveness. The study used quantitative data collected through questionnaires to assess the effectiveness of ChatGPT in improving students' academic writing skills. Data was gathered via an online questionnaire completed by 18 postgraduate students who had used the chatbot to write essays. Our findings reveal that ChatGPT can significantly enhance students' writing skills, helping them avoid grammatical and lexical errors while also reducing writing time. However, the study also uncovered certain challenges, such as concerns about the use of a copyrighted chatbot and the cost of implementation. Despite these obstacles, the research underscores the value of ChatGPT as a tool for educators designing language programs and for researchers working in comparable settings.

Keywords: AI, academic writing, ChatGPT, postgraduate

Introduction

In recent years, artificial intelligence (AI) has become increasingly integrated into various aspects of education, offering innovative solutions to enhance learning experiences and outcomes. One such AI tool, ChatGPT, has gained attention for its ability to assist students in academic writing, particularly at the postgraduate level. Academic writing requires not only mastery of content but also the ability to present arguments with clarity and correction to formal writing conventions. For many postgraduate students, these requirements can be challenging, especially when it comes to avoiding grammatical errors, improving lexical choices, and ensuring overall coherence.

The primary aim of this study is to examine the utilization of ChatGPT in giving feedback on academic writing for postgraduate students. Its objectives include evaluating ChatGPT's accuracy and effectiveness in grading academic papers, identifying the tool's strengths and

limitations for reviewing writing, and exploring ways ChatGPT can help students improve their academic writing skills.

The study will focus on postgraduate students from a public university in Vietnam. By concentrating on this group, the research hopes to explore the unique challenges and opportunities that arise when using ChatGPT in a nonnative English-speaking academic environment. The researchers will collect data through surveys and analyze the results generated by ChatGPT. The study will be limited to English, and only academic papers will be assessed.

Additionally, the significance of this study is that it contributes to the existing literature on the role of technology in aiding academic writing assessment. It seeks to evaluate the use of ChatGPT in assisting postgraduate students in producing quality academic writing. The study's findings will provide insights into the potential benefits and challenges of utilizing ChatGPT in grading academic papers. The areas that require improvement in ChatGPT can be highlighted from the research. Finally, the findings from this study can be used to inform policymakers and educators about the role of technology in the assessment of academic writing.

Literature review

The definition of Academic Writing

The definition of academic writing has been concluded by much research. According to Oshima and Hogue (2007, p. 3), "Academic writing is the kind of writing used in high school and college classes. Academic writing is different from creative writing, which is the kind of writing you do when you write stories. It is also distinct from personal writing, which is the kind of writing you do when you write letters or emails to your friends and family." Chen and Baker (2010) divide it into two types: student academic writing and expert academic writing. The former is used as a form of assessment at school, while the latter is intended for publication in an academic journal or book. This type of writing is known for its structured, evidence-based, critical, balanced, precise, objective, and formal characteristics, setting it apart from other forms of writing (Gillett, 1999).

AI text generator in academic writing

According to Luger (1993), artificial intelligence (AI) is a field of computer science that automates intelligent behaviors. On the other hand, by using computer math facts to generate data, machines' mental abilities are compared to those of people (Charniak & McDermott, 1987). Besides, Nilsson (1998) said, "AI is preoccupied with intelligent behavior artifacts." Considering the criteria mentioned, artificial intelligence (AI) is the capacity of a machine or computer software to imitate or replicate human intellect and behavior.

A tool known as an AI text generator is frequently used in scholarly writing today. Artificial intelligence is a term used to describe a specific type of AI system that can generate text using natural language processing (NLP). AI text creation algorithms are able to understand the grammatical rules and structures of real languages just like they would if they had access to vast amounts of textual data. The new texts are then created using the same grammar and syntax standards. This Artificial text generation capability has advantages, disadvantages, and consequences if misused.

Positive aspects

One of the main benefits of AI text generators in academic writing is that they produce material more quickly and effectively than humans (Golan et al, 2023). While a typical article takes

hours to write and correctly edit, writers can use AI natural language processing algorithms to check and correct errors in their work in just a few minutes. AI text generation can also recommend books and provide users with study summaries. These diagrams can be used as frameworks to make sure that all of a text's crucial elements are included. Finally, AI-powered articles or abstracts make specific suggestions. As an illustration, the AI can recommend pertinent prior research papers for the introduction or limit the discussion portions of the manuscript.

Negative aspects

Because it is derived from the same source, when AI is misused in academic writing, the article's content will contain passages that are comparable to those of previously published material (Hetler, 2023). AI tools will put together and arrange the referenced pieces from various websites. Creating authoritative and instructive content can be challenging when compiling data from various websites without using proper human judgment. Plagiarism is what causes academic writing to become forbidden.

In addition to the issue of plagiarism, using AI text generators can limit your creativity and customization. Creativity constantly increases a piece's appeal to readers. Due to its lack of creativity, AI cannot produce novel ideas or original content. Creating original content on the newest and most well-liked concepts and ideas becomes difficult.

Challenges in Academic Writing

With the constant advancement of technology, people can now self-study English communication through a variety of methods, including watching instructional videos, engaging in interactive practice, and corresponding online with friends from across the world social interaction to enhance communication and reactions. Also, users can make use of supporting tools like Grammarly, Quillbot, etc. to help them with their style and grammar in academic writing. Academic English is more demanding and challenging for learners, though. Academic languages require a long time for students to do their work in addition to being boring and unusable in daily life. Studies have documented the challenges that students at both undergraduate and graduate levels encounter when writing papers for content-based courses (Braine, 2002; Braxley, 2005; Gurel Cennetkusu, 2012).

Thus, students will find academic writing easier if AI text generators are supported. This study will mention Chat GPT, a tool for assisting students in producing academic texts.

ChatGPT

ChatGPT (Chat Generative Pre-training Transformer) is a chatbot developed by OpenAI based on Google's Transformer model. This AI (artificial intelligence) assists you in creating automated conversations and answering questions on various topics and fields.

ChatGPT has many different versions, of which GPT-1 is the first. GPT-1 is relatively small in size and complexity compared to later versions. In the field of language artificial intelligence, researchers evaluate AI intelligence by hyperparameters, which measure how deeply the AI understands the text used in the training.

Advantage of Chat GPT in many fields and Academic Writing

The demand to employ conversational AI grows along with workload and competition in academics (Bishop, 2023). Chatbots offer ways to do jobs fast, whether you're a PhD student working to finish your dissertation, a researcher wanting a speedy literature review for your grant proposal, or a peer reviewer with a deadline to meet for your study. Besides, recent studies

highlight the growing influence of AI-powered tools on the academic writing of EFL learners. Tools like ChatGPT and Grammarly provide convenience and meet the needs of learners, improving writing fluency, content quality, and knowledge (Yuan et al., 2024; Tran & Tran, 2023; Nguyen, 2023).

Results may be published more quickly if AI chatbots could assist with these duties, freeing up academics to concentrate on fresh experimental approaches. This might greatly speed up invention and possibly result in ground-breaking discoveries in a variety of fields. If the current teething issues related to bias, provenance, and inaccuracy are resolved, we believe this technology has immense promise. It is important to examine and advance the validity and reliability of LLMs so that researchers know how to use the technology judiciously for specific research practices.

The academic skill set may be rebalanced thanks to AI technologies. On the one hand, AI could enhance academic teaching (Zhai et al., 2021), for instance, by giving feedback to students to help them become better writers and thinkers. On the other hand, it might lessen the requirement for some abilities, including the capacity to conduct a literature search. Also, it might introduce fresh competencies like speedy engineering (designing and crafting the text used to prompt conversational AI models). Although most researchers no longer manually undertake statistical analyses, the loss of some talents may not necessarily be negative, but as a community, we must carefully examine whether academic skills and traits remain crucial for researchers.

Moreover, it is a cost-effective alternative for companies of all kinds due to its excellent scalability and efficiency (Eva et al., 2023). It has a low percentage of false positives and negatives and is quite accurate. Due to its capacity to comprehend both written and spoken language, ChatGPT offers a more thorough dialogue than previous technologies.

ChatGPT employs pre-trained datasets that are currently available, so you can avoid spending time and money on model development. This enables you to deploy ChatGPT and start using it right away. ChatGPT can self-learn, meaning it can continuously enhance its performance and needs minimum monitoring.

Research Questions

To achieve the objectives of the study, the following question is posed to search for answers:

How effective is ChatGPT in supporting academic writing for postgraduate students?

Methods

Pedagogical Setting & Participants

This research article discusses the impact of using AI tools (ChatGPT) to support academic writing. A total of 18 participants, divided into 6 groups consisting of postgraduate students studying for their M.A. at the School of Language and Tourism (SLT-HaUI), took part in the research. Regarding the sampling procedure, we chose this group of participants for two reasons. First, they are studying for an M.A.. Therefore, they are usually required to write research papers with academics. Besides, we had to make sure that most of them hardly used Chat GPT to support their academic writing.

Design of the Study

In our quantitative research, we used self-administered questionnaires to design the questions. The research includes both open-ended and closed-ended questions and a Likert scale. The goal was to collect survey responses from 18 M.A. students at SLT.

Data collection & analysis

Our research was conducted virtually through Google Forms, and participants were given 5 minutes to fill in the survey anonymously. The survey asked about specific AI tools that participants have used or are interested in using, how often users use AI tools for academic writing, the time they spent on writing a paragraph before and after using an AI tool, their satisfaction, and the difficulties they faced while using AI tools. In total, 14 over 18 participants responded, due to this, 14 survey results were included in the analysis.

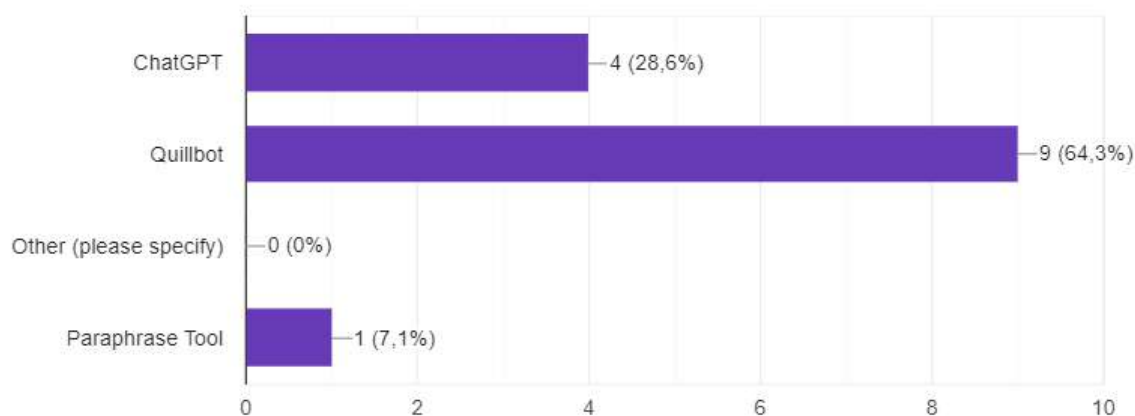
Results/Findings

The use of technology in education has been growing rapidly. With advancements in artificial intelligence (AI), educational institutions are exploring the use of AI-based tools to enhance the learning experience. One such tool is ChatGPT, a large language model trained by OpenAI. This study aims to explore the effectiveness of using ChatGPT in checking academic writing for postgraduate students.

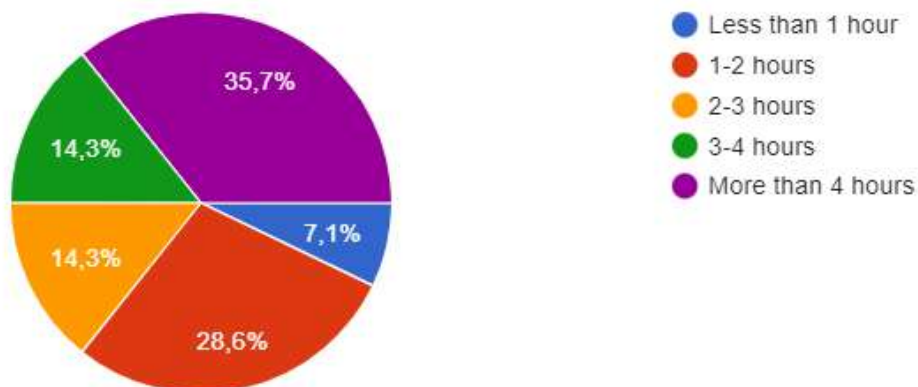
After conducting a survey of graduate students about using ChatGPT to support learning and correct writing errors, all fourteen out of fourteen participants used ChatGPT to check their writing during the course of Academic Writing. Although ChatGPT is not the most preferred tool they use to check writing (28.6%), behind Quillbot (64.3%), when using ChatGPT, the time they spend writing has been significantly reduced (Figure 1).

Figure 1

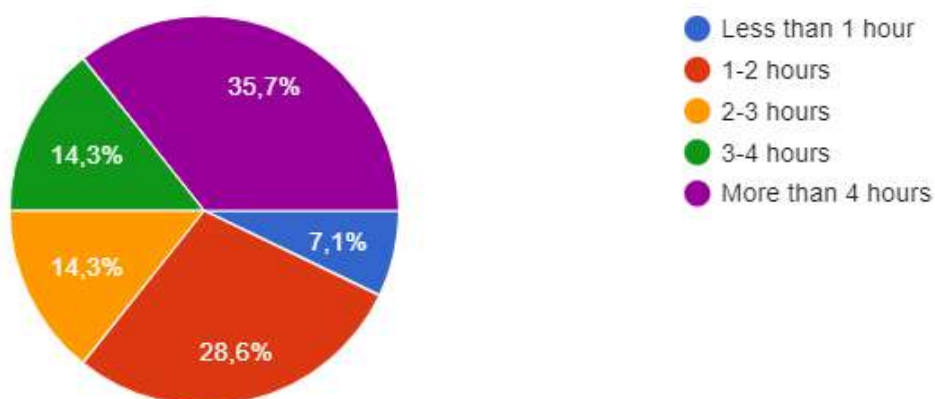
List of tools used to check academic writing



Specifically, 35.7% of participants said that they usually spend more than 4 hours to complete an essay, 28.6% write within 1-2 hours, 28.6% write in 2-4 hours, only 7.1% of the participants were able to write within 1 hour (Figure 2).

*Figure 2**Average amount of time to write an essay without supporting of AI tools*

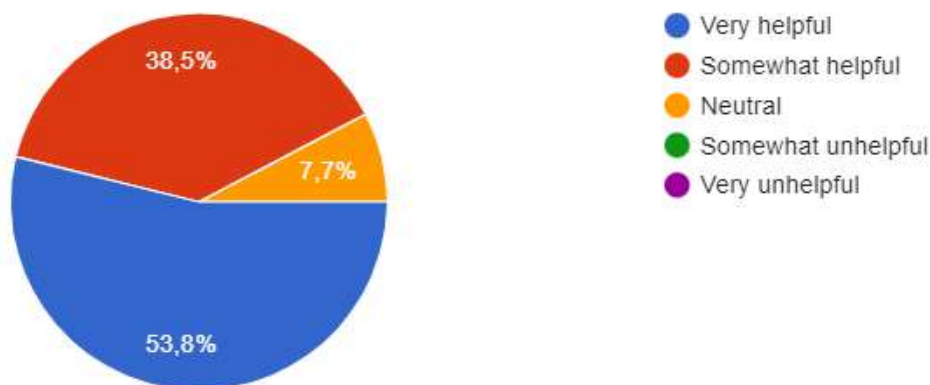
However, thanks to Chat GPT, the number of hours spent on writing was reduced as follows: 30.8% of students completed the lesson in just the first hour, increasing by about 23%, accounting for the highest percentage. The number of people who needed 4 hours to write an article decreased to 15.4%, and only 30.8% spent 1-2 hours writing articles (Figure 3).

*Figure 3**Average amount of time to write an essay with supporting of AI tools*

When asked about their evaluation after using ChatGPT, 53.8% of users shared that ChatGPT is a very useful tool for checking errors in their essays. About 38% affirm that ChatGPT is useful in certain writing cases. 7.7% have no opinion, especially no participants, that GPT Chat is not useful (Figure 4).

Figure 4

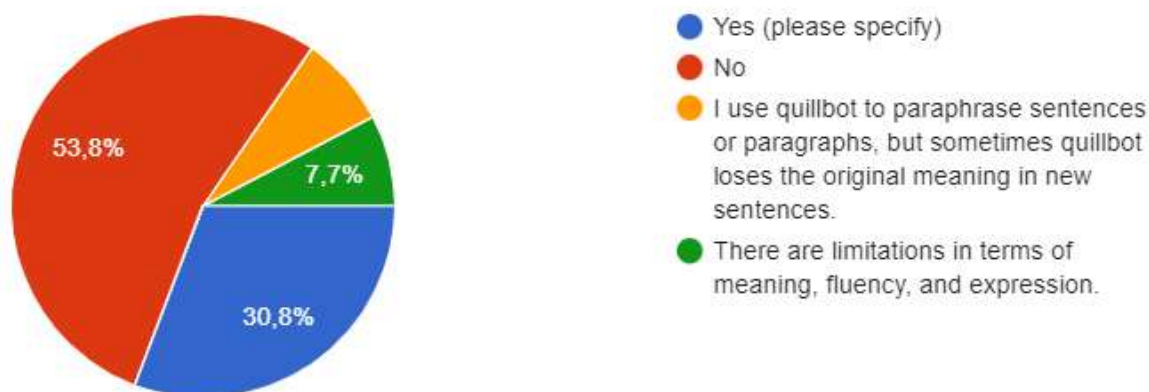
The overall evaluation of postgraduate students after using ChatGPT in writing



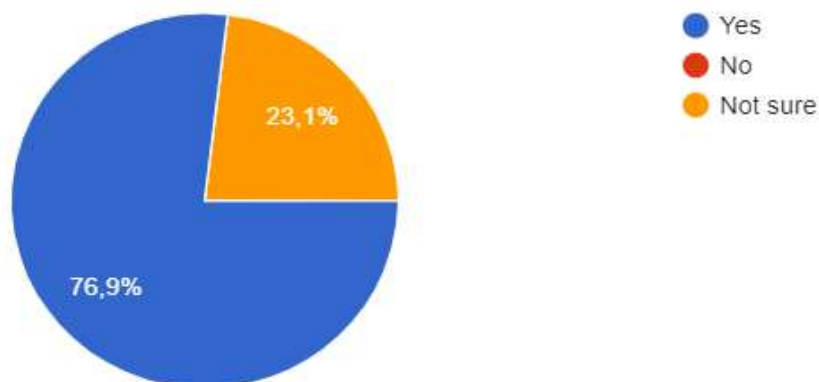
ChatGPT helps learners improve their writing speed, of which 53.8% of users do not face any difficulties or disadvantages when using the application. However, we cannot deny that there are still some minor disadvantages during use; only 7.7% of users agree that there are limitations in terms of meaning, fluency, and expression. (Figure 5)

Figure 5

Some limitations when using ChatGPT in writing



Besides, 76.9% of users said they would recommend that their students use ChatGPT while studying at the university (Figure 6). This shows strong support for ChatGPT's utility in aiding learning, with many users recognizing its potential to enhance the learning experience for students at the University level.

*Figure 6**Percentage of users who recommend ChatGPT for academic use*

Discussion

The results from the survey helped answer the research questions.

All graduate students use AI tools in writing, specifically in Academic Writing. In fact, ChatGPT is in the top 2 most popular applications, and the main reason for its popularity is its authenticity and time-saving.

In terms of time, students have nearly halved their writing hours. With the traditional method in the past, when there was no AI tool, students needed time to check grammar and spelling errors by talking with instructors and classmates or searching for information on the Internet. Thanks to the advent of ChatGPT, the above steps became redundant because ChatGPT can take care of the above steps in just a few seconds. Besides, ChatGPT helps them by giving ideas for their writing; it solves the problem of lack of ideas when doing student writing.

The second reason ChatGPT is so popular is that it gives answers that contain authentic information. With simple commands, ChatGPT can provide users with information containing specific sources and links.

More than half of users rate ChatGPT as a very useful AI tool. However, ChatGPT is not an absolutely perfect tool because the application also has limitations in terms of semantics and expressions. Lin and Morrison (2021) argue that academic writing requires critical thinking and advanced writing skills, making it both challenging and complex. Given that many participants struggle with grammar and writing standards, Imran and Almusharraf (2023) describe ChatGPT as a tool that helps improve students' writing. However, despite the availability of ChatGPT, the participants in this study still encounter difficulties with grammar and syntax, indicating persistent issues with grammar structures and language use that negatively affect the quality of their academic writing. Therefore, developing and improving the application in the future is necessary.

In short, ChatGPT has some disadvantages. However, we cannot deny the benefits it brings to graduate students in academic writing.

Implications of utilizing ChatGPT in checking academic writing

This study found several important effects of using AI in education (for both students and educators). The learning rate of students increases due to their use of AI, which saves time. Here, AI is used as a tool to check academic writing; the time it takes for it to respond is quite fast; it only takes a few seconds for students to get a response. From there, they can complete their assignments on time and effectively. Therefore, not only does learning productivity increase, but students' grades also improve.

An important implication of this study is the potential for AI technology to dramatically change students' approach to academic writing. In addition to saving time and increasing learning productivity, the use of ChatGPT also has a deeper meaning. Students receive feedback and comments quickly, and they are not as pressured as when receiving feedback from teachers. That helps them reduce the stress and anxiety associated with academic writing, allowing them to focus more on their studies.

Another important point from this study is that the use of AI in education will likely become more frequent. As AI technology improves, it will help learners detect even more literary errors and provide useful vocabulary related to the topic that learners are aiming for. This helps students and educators speed up the academic writing process.

However, it is important to understand that AI technology, in general, and ChatGPT in particular, cannot replace humans or the ability to think critically. It can give feedback on vocabulary and grammar, but it cannot provide feedback that contains nuances and vibes of the writer. Therefore, it is necessary to use ChatGPT in combination with other tools or resources to ensure the quality of the product, from academic writing to the highest level.

Additionally, educators can use ChatGPT as a teaching tool and teaching support to help students recognize common mistakes in academic writing and improve their writing skills. Teachers can incorporate ChatGPT in the classroom, thereby instructing students to use this AI technology effectively. This approach fosters students' critical thinking and prepares them for a technology-based future.

To summarize, using ChatGPT to improve academic writing skills has important implications for education. As AI continues to evolve, we can expect more advanced systems capable of detecting more writing errors. However, it's important to remember that AI should assist, not replace, human editors and critical thinking skills.

Conclusion

In short, this study of the use of ChatGPT to improve graduate students' academic writing skills found that the technology could dramatically change their approach to academic writing. The results show that ChatGPT, developed by OpenAI, is capable of detecting grammatical, spelling, and punctuation errors in real time and making suggestions for improvement. This saves students valuable time by minimizing the need for self-assessment of their work.

Although there are still some limitations in terms of usability (if you only use the trial version and not the paid version) or overuse AI to write articles, there is no denying the usefulness of ChatGPT in improving writing ability in general and academic writing skills in particular. This could also be an idea for technology developers to aim to improve on the limitations that Chat GPT currently has, supporting users to use it effectively but not be dependent on it, especially in the field of education.

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The realization of thematic progression in argumentative essays by third-year English-majored students at a public university in Vietnam

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ABSTRACT

Keywords: Thematic progression, argumentative writing, third-year English-majored students

Text coherence remains a challenge for both teachers and students in ESL/EFL writing courses. Text coherence is determined by thematic progression patterns, which describe the organization of theme and rheme in a text. Using a qualitative research approach, this study aims to analyze the thematic progression patterns in argumentative essays written by third-year English-majored students at a public university in Vietnam. It was found that simple linear thematic progression was the most popular pattern in the students' argumentative essays. The study hopes to contribute to the field as a reference for teaching academic writing to English-majored students at the tertiary level in Vietnam.

Introduction

Writing undoubtedly plays an important role in teaching and learning a language. Argumentative writing is an important skill in an educational context. When attending university, students must encounter many writing tasks involving argumentative functions, such as reviews, reports, essays, and term papers (Jackson, 2024). Argumentative writing helps learners develop their reasoning skills, as students must use logical techniques such as analyzing concepts, making judgments, and reasoning to dissect problems in their writing (Pennebaker et al., 1990). Argumentative writing also supports learners in fostering their critical thinking ability because students must examine tacit beliefs and assumptions during the writing process (Hadley & Boon, 2003).

However, EFL/ESL learners encounter many difficulties in writing an argumentative text compared to a narrative text (Beers & Nagy, 2011). Argumentative writing requires students to employ more sophisticated vocabulary and grammar than other text types (Bar-Ilan & Berman, 2008; Beers & Nagy, 2011). This kind of writing also involves the use of a knowledge-transforming strategy, which requires writers to reorganize the retrieved content and ideas in their written work (Scardamalia & Bereiter, 1987). In Vietnam, English-majored students at the tertiary level have problems with coherence in writing argumentative essays. Many students produced argumentative essays with little focus on the writing topic (Dang et al., 2020; Nguyen

et al., 2021). Some English-majored students found it challenging to develop their ideas in argumentative essays (Dang et al., 2020; Nguyen et al., 2021).

Argumentative writing is a genre that English-majored students must acquire before graduating from universities in Vietnam. On the journey to write argumentative essays effectively, English-majored students encountered many difficulties, such as a lack of knowledge of grammar vocabulary and poor idea development (Bar-Ilan & Berman, 2008; Beers & Nagy, 2011; Dang et al., 2020; Nguyen et al., 2021). This is mainly because coherence is an abstract concept. There are many teaching and learning methods to improve coherence in students' essays, such as the use of AI tools in writing classes (Phan, 2023; Tran, 2024). However, this study focuses on how coherence is manifested in argumentative essays. Dane (1974) used systemic language theory to devise thematic progression and shed light on coherence. With thematic progression by Danes (1974), teachers and students can expand their understanding of how a theme progresses throughout a text, which increases the level of coherence of the text.

At the university where this study is conducted, the researcher observed that third-year English major students receive low scores in terms of coherence in their argumentative essays. Therefore, this current study employs the theoretical framework on thematic progression by Danes (1974) to analyze thematic progression patterns in students' argumentative essays. The thematic progression will help to determine the coherence in students' argumentative essays. This type of research has never been done at this university before.

Literature review

Coherence and cohesion in academic writing

Coherence refers to "an underlying logical structure that acts to guide the reader through the text" (Neubert & Shreve, 1992, p. 94). The "underlying logical structure" is understood as the connection and progression of ideas in a text. There are two types of coherence: propositional coherence and interactional coherence (Todd et al., 2007). Propositional coherence indicates the implicit connection between statements in a text, which requires the background knowledge of readers. Interactional coherence describes the implicit connection among functions in a text.

Cohesion indicates a set of linguistic resources that help writers link different parts of a text (Halliday & Hasan, 1989). The linking of many parts in a text is determined by connecting sentence to sentence and paragraph to paragraph. This process involves the use of words or phrases that display relations, which are also known as cohesive devices. Five main types of relations include reference, substitution, ellipsis, conjunction, and lexical cohesion (Halliday & Hasan, 1976). The appropriate use of cohesive devices contributes to the cohesion of a text.

The major difference between coherence and cohesion is that the former refers to the implicit connection between concepts, propositions, and communicative functions, whereas the latter describes the explicit relationship between sentences and paragraphs. However, coherence and cohesion are interrelated because cohesive devices help readers uncover the text's coherence. This current study focuses on examining propositional coherence in argumentative writing by third-year English-majored students.

Thematic progression

Thematic progression refers to how themes and rhemes are organized in sentences to develop ideas in a text (Danes, 1974). While a theme takes the initial position in a clause and establishes the focus of the clause, a rheme follows and elaborates on the theme (Halliday & Matthiessen, 2014).

Danes (1974) developed one of the earliest frameworks on thematic progression (TP), with three types: Simple Linear TP, TP with a Continuous Theme, and TP with Derived Themes. These types of TP are presented in Figure 1, figure 2, and figure 3, respectively.

Figure 1.

Simple linear thematic progression

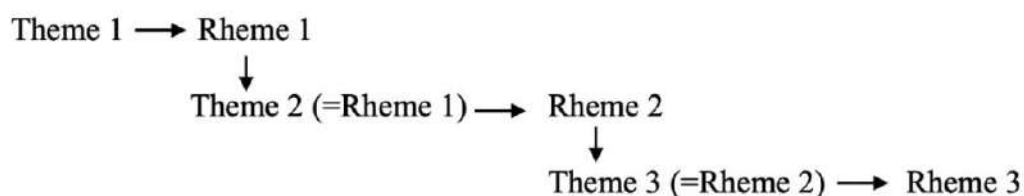


Figure 1 shows that in Simple Linear TP, the theme of a sentence is introduced in the rhyme of the preceding sentence.

Figure 2.

Thematic progression with a continuous theme

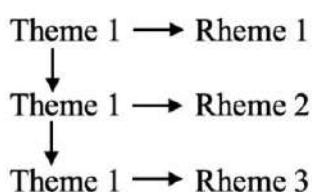
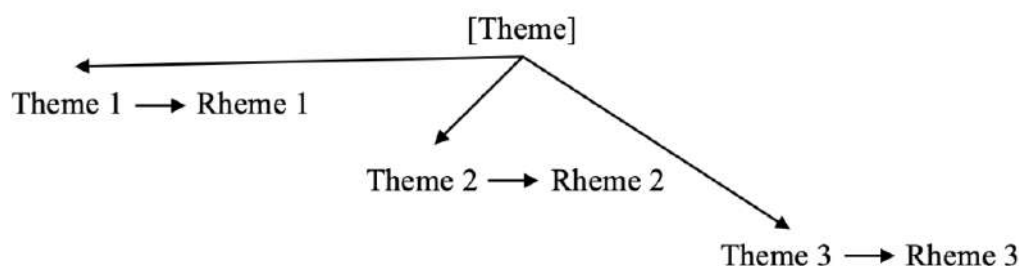


Figure 2 illustrates a Continuous Theme characterized by the repetition of one theme across many sentences (Figure 2). The theme can be expressed in different wordings.

Figure 3.

Thematic progression with derived themes



As can be seen from Figure 3, multiple sub-themes, such as Theme 1, Theme 2, and Theme 3, are derived from one theme.

In this study, Danes' (1974) thematic progression model is used to describe the underlying structure of a text. Thematic progression is a useful tool for analyzing propositional coherence (Todd et al., 2007).

Previous studies

Several studies have examined thematic progression patterns in students' argumentative essays. Using Danes' (1974) framework on thematic progression to analyze students' essays, it was found that the most popular pattern is TP with a continuous theme, followed by simple linear TP, and the least proportion came to TP with derived themes (Soleymanzadeh & Cholami,

2014). Danes' (1974) framework was also used to investigate thematic progression patterns between low- and high-scoring essays. The findings suggested that low-scoring essays contained a high frequency of new themes in clauses, followed by some instances of TP with a continuous theme and simple linear TP (Pavavijarn, 2022). By contrast, TP with a continuous theme and simple linear TP was found to have the highest occurrences in high-scoring essays (Pavavijarn, 2022). Eggins' (2005) approach was used to identify thematic progression in students' essays. It was concluded that TP with a continuous theme was the most common pattern, followed by simple linear TP, and TP with derived themes being the least frequent (Sari & Agustina, 2022).

Research Question

The study aims to examine thematic progression in argumentative essays by third-year English-majored students. To fulfill this aim, the study seeks to answer the research question: "What thematic progression patterns are realized in third-year English-majored students' argumentative essays?"

Methods

Pedagogical Setting & Participants

This study was conducted at a university in Hanoi, where students do the degree of Bachelor in English. The students must complete five writing courses, including English writing skills 1, English writing skills 2, English writing skills 3, English writing skills 4, and English writing skills 5. Entering the first semester of the third year at university, English-majored students take the course "English Writing Skills 5", which consists of ten modules. Four of the ten modules are designed for students to learn to write argumentative essays.

After taking four modules of argumentative writing, students take a progress test that aims to measure students' writing ability in this genre. When the students take this test, the English language proficiency of most students is expected to be at the B2 level according to the Common European Reference Framework (CERF). The assumption about the English language proficiency of the participants stems from English teachers who are in charge of "English Writing Skills 5" classes.

Design of the Study

The study adopts a qualitative approach, which helps researchers study a phenomenon in its natural setting by examining the meanings that people attach to such a phenomenon (Denzin & Lincoln, 1996). The qualitative approach refers to a research procedure that involves gathering information from participants and then transforming the information into themes, which are developed into broad patterns (Creswell & Creswell, 2017). Some qualitative methods should be employed to collect data, such as observation, interview, and text analysis (Creswell & Creswell, 2017). Textual analysis is a method of analyzing data to examine the meaning and structure of texts (Benaquisto & Given, 2008).

Data collection & analysis

The researcher visited one class of third-year English-majored students to ask the teacher and the students for their approval of photocopying the argumentative essays written by the students during the progress test of the course "English Writing Skills 5". It is noted that these essays were marked by the teacher, and the students were informed of their grades before the

researcher borrowed the essays. After photocopying 25 argumentative essays, the researcher returned the essays to the teacher for record.

Based on Danes' (1974) framework on thematic progression, the data were analyzed following the steps below:

- 1) A T-unit is identified in each essay. A T-unit is “an independent clause together with all hypotactically related clauses and words that are dependent on that independent clause” (Fries, 1995, p. 49). The number of T-units will correspond to the number of independent clauses.
- 2) The boundary between theme and rheme in each T-unit is drawn based on work by the work (Halliday & Matthiessen, 2014). If an independent clause is placed before a dependent clause, the theme of the independent clause functions as the theme of the whole clause complex. When a dependent clause precedes an independent clause, the former is viewed as the theme, and the latter is taken as the rheme.
- 3) A diagram that illustrates the TP patterns of each paragraph of an essay is drawn.
- 4) The number of TP patterns is counted from the diagram. In this study, the thematic progression pattern is counted at the sentence level. At this level, it is ideal that at least two independent clauses exist in a sentence so that thematic progression can be realized in the sentence. However, if there is only one clause in the sentence, it is necessary to look at the following sentences. Counting TP patterns is decided by the switch of themes among types of TP. For instance, sentence 1, sentence 2, and sentence three are placed next to each other. Sentence 1 and sentence 2 illustrate simple linear TP, and sentences 2 and sentence 3 also signify simple linear TP. Suppose the theme that progresses in each TP is the same, which is considered one TP pattern. If the theme in TP from sentence one and sentence 2 is different from the theme in TP from sentence 2 to sentence 3, the number of TP patterns is two.
- 5) The number of TP patterns is presented quantitatively using tables.

Findings

Physical features of essays

In this study, the researcher collected 25 argumentative essays written by third-year English-major students at a university in Hanoi. The essays were created during a progress test after students studied four modules on argumentative writing. All the essays are structured with three main parts: Introduction, Body, and Conclusion. Each essay has one introduction paragraph, two body paragraphs, and one conclusion paragraph.

Thematic progression patterns in introduction paragraphs of students' essays

The study employed three types of thematic progression by Danes (1974). It was found that 17 of 25 introduction paragraphs did not follow any of the thematic progression patterns by Danes (1974). This is because the students tend to begin the clauses with a new theme. Table 1 describes the occurrence of thematic progression in eight introduction paragraphs of students' argumentative essays.

Table 1.

Thematic progression in introduction paragraphs of students’ essays

Thematic progression pattern	Occurrences	Percentage
Simple linear thematic progression	6	77%
TP with a continuous theme	2	25%
TP with derived themes	0	0%

Table 1 shows that simple linear thematic progression was found in introduction paragraphs with the highest frequency (75%), followed by thematic progression with a continuous theme (25%). No thematic progression with derived themes was found in the introduction paragraphs. It is suggested that third-year English major students would prefer a straightforward approach in introduction paragraphs by linking each new sentence closely to the previous one. This structure can help the students establish a clear flow of information in the introduction paragraphs, making it easier for readers to follow the writer’s viewpoint at the beginning of an argumentative essay.

A simple linear thematic progression in an introduction paragraph is shown in Figure 4.

Figure 4.

The mapping of simple linear thematic progression in Text 14

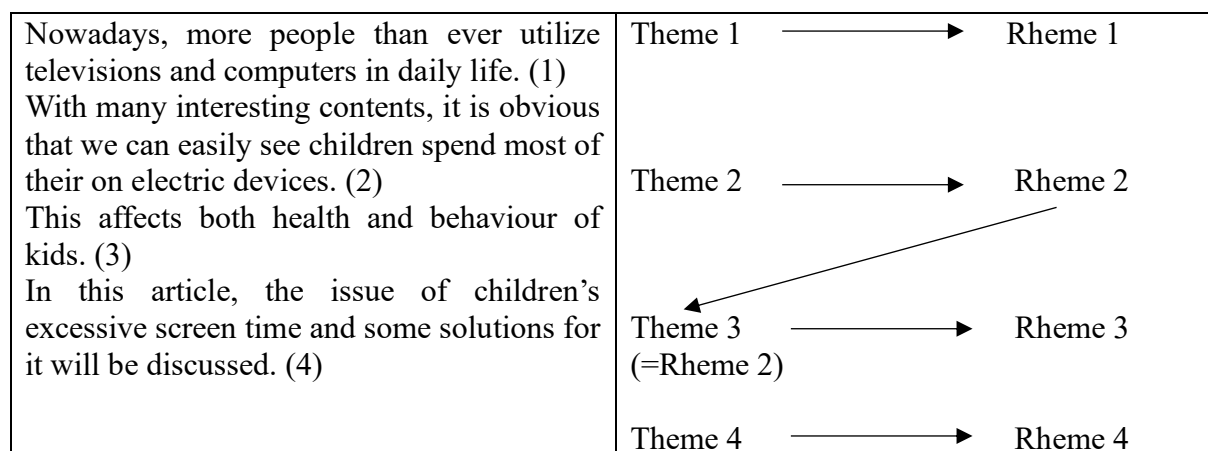


Figure 4 shows that Rheme 2, “that we can easily see children spend most of their on electric devices.” is picked up on the following Theme 3, “this.” There is no progression from Theme 1 to Theme 2 and from Theme 3 to Theme 4.

Thematic progression with a continuous theme in an introduction paragraph is shown in Figure 5.

Figure 5.

The mapping of thematic progression with a continuous theme in Text 16

<p>In this modernized world, youngsters are getting more and more accessible to advanced technologies such as televisions or computers. However, children excessively use them on a daily basis. This essay will point out the problems which can be resulted in and show some useful measures to tack those issues.</p>	<p>Theme 1 → Rheme 1</p>
	<p>↓</p> <p>Theme 2 → Rheme 2 (=Theme 1)</p>
	<p>Theme 3 → Rheme 3</p>

As can be seen from Figure 5, Theme 1, “youngsters,” and Theme 2, “children,” indicate young people who use technological devices for a considerable amount of time. In other words, the same theme is repeated across clause one and clause 2.

Thematic progression patterns in body paragraphs of students' essays

It was found that 8 of 50 body paragraphs did not match any of the thematic progression patterns by Danes (1974). Table 2 describes the occurrences of thematic progression in 42 body paragraphs of students' argumentative essays.

Table 2.

Thematic progression in body paragraphs of students' essays

Thematic progression pattern	Occurrences	Percentage
Simple linear thematic progression	55	71%
TP with a continuous theme	19	25%
TP with derived themes	3	4%

Table 2 shows that the highest frequency of thematic progression patterns came to simple linear thematic progression (71%), followed by thematic progression with a continuous theme (25%), and the least thematic progression with derived themes (4%). This result suggests that third-year English-majored students rely on simple linear progression to structure information clearly and directly. The low frequency of thematic progression with derived themes indicates that complex thematic structures are less favored by the students because the students would rather craft a text that is easily accessible and straightforward rather than layered with multiple ideas.

A simple linear thematic progression in one body paragraph is illustrated in Figure 6.

Figure 6.

The mapping of simple linear thematic progression in Text 24

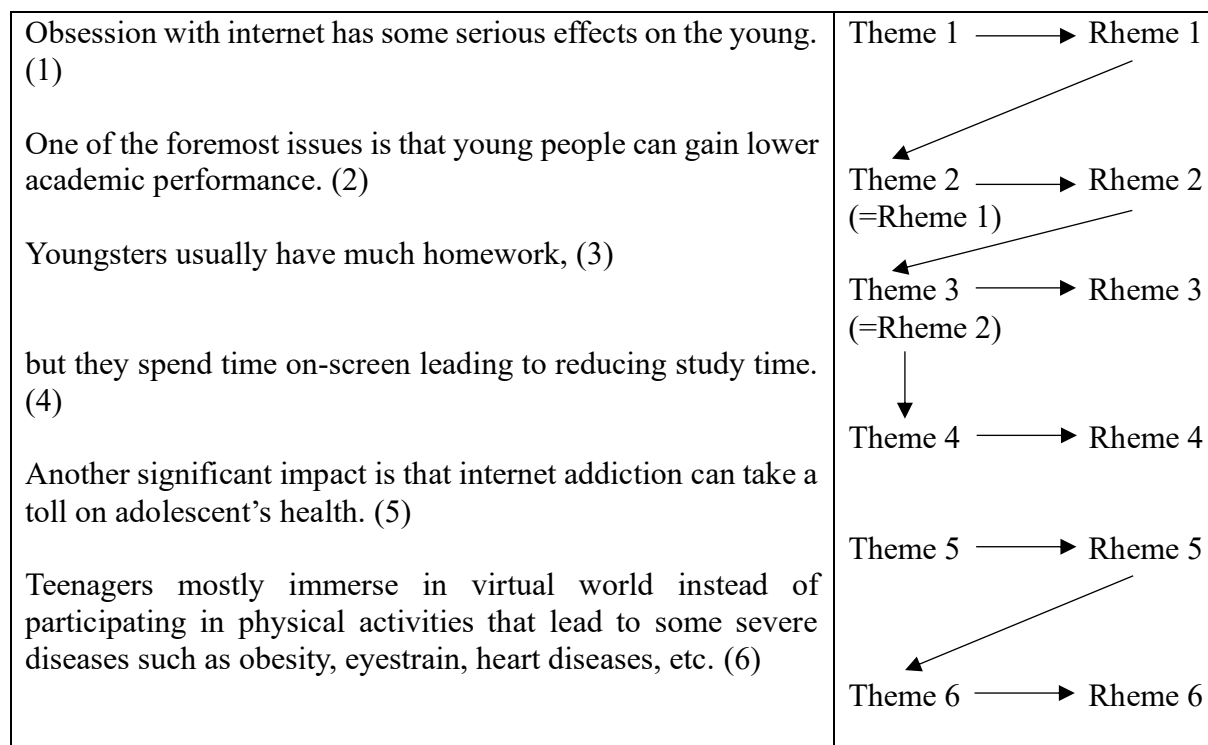


Figure 6 shows that Theme 2, “issues,” develops from Rheme 1, “serious effects.” Similarly, Rheme 2, “young people,” transitions into Theme 3, “Youngsters,” and Rheme 5, “adolescent” becomes Theme 6, “teenagers.” Rheme 1, Rheme 2, and Rheme 5 progress into Theme 2, Theme 3, and Theme 6, respectively, which characterizes simple linear thematic progression in the body paragraphs of students’ essays.

Thematic progression with a continuous theme in one body paragraph is shown in Figure 7.

Figure 7.

The mapping of thematic progression with a continuous theme in Text 1

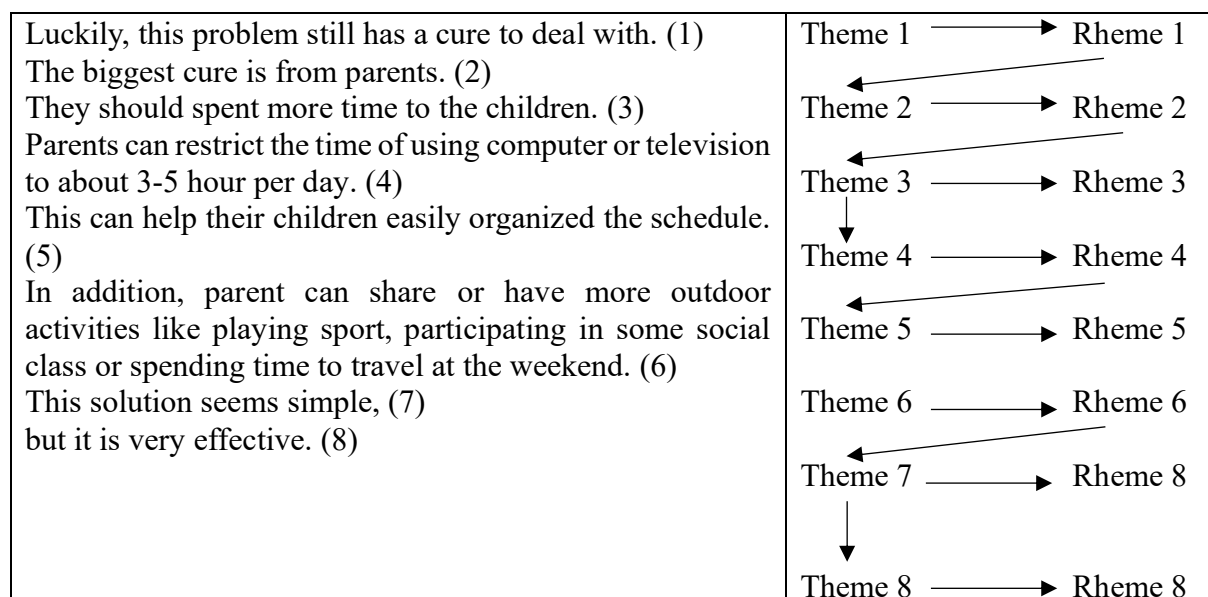


Figure 7 shows that simple linear thematic progression happens four times, whereas thematic progression with a continuous theme occurs twice. Theme 3, “they,” and Theme 4, “parents,” refer to the same people. Theme 7, “this solution,” and Theme 8, “it” remain constant across clause seven and clause 8.

Thematic progression with derived themes in one body paragraph is displayed in Figure 8.

Figure 8.

The mapping of thematic progression with derived themes in Text 15

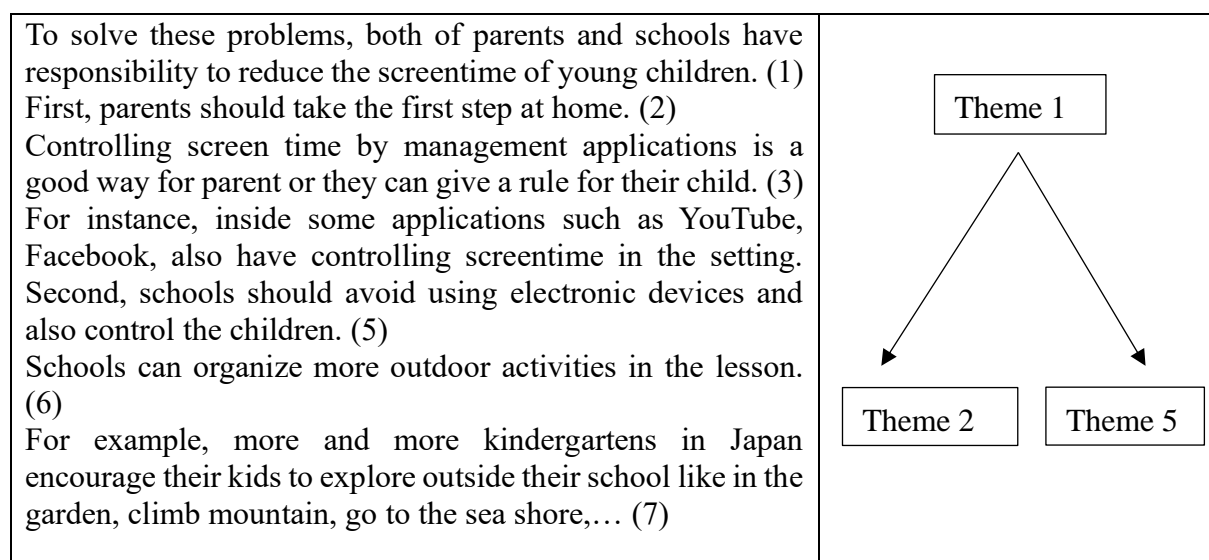


Figure 8 shows that Theme 1, “both of parents and schools,” has two sub-themes, including Theme 2, “parents” and Theme 5, “schools.”

Thematic progression patterns in conclusion paragraphs of students’ essays

It was found that 17 of 25 conclusion paragraphs do not fit into any of the thematic progression patterns by Danes (1974). Table 3 describes the occurrences of thematic progression in eight conclusion paragraphs of students’ argumentative essays.

Table 3.

Thematic progression, in conclusion, paragraphs of students’ essays

Thematic progression pattern	Occurrences	Percentage
Simple linear thematic progression	8	67%
TP with a continuous theme	1	23%
TP with derived themes	0	10%

Table 3 shows that simple linear thematic progression and thematic progression with a continuous theme accounted for 67% and 23% of the total thematic progression patterns, respectively. No thematic progress with derived themes was realized in the conclusion paragraphs. The high percentage of simple linear thematic progression indicates that the students would prefer a straightforward approach to conclude their texts, where each sentence is built based on the information in the previous one.

A simple linear thematic progression in a conclusion paragraph is shown in Figure 9.

Figure 9.

The mapping of simple linear thematic progression in Text 7

<p>In conclusion, children spend a considerable amount of time on using computers every day. This can make them addicted and cause some physical and mental health problems. The key to this problem is the responsibility of their parents.</p>	<p>Theme 1 → Rheme 1</p> <p>←</p> <p>Theme 2 → Rheme 2 (=Rheme 1)</p> <p>←</p> <p>Theme 3 → Rheme 3 (=Rheme 2)</p>
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Figure 9 shows that Rheme 1, “spend a considerable amount of time on using computers every day,” turns into Theme 2, “This,” and Rheme 2, “make them addicted and cause some physical and mental health problems,” becomes Theme 3 “the key to this problem.” These progressions characterize simple linear thematic progression.

Thematic progression with a continuous theme in a conclusion paragraph is shown in Figure 10.

Figure 10.

The mapping of thematic progression with a continuous theme in Text 7

<p>In conclusion, children spend time on screen so much for several reasons and different purposes. Children should balance time to use televisions and out activities that can help them improve mental and physical health.</p>	<p>Theme 1 → Rheme 1</p> <p>↓</p> <p>Theme 2 → Rheme 2 (=Theme 1)</p>
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As can be seen from Figure 10, Theme 1 and Theme 2 are constant as they refer to children.

Discussion

In this study, the work by Danes (1974) was employed to analyze thematic progression patterns in argumentative essays by third-year English-majored students. The third-year English-majored students in the study would favor a straightforward approach to writing argumentative essays.

In the introductory paragraphs, the students tended to use simple linear thematic progression by linking each sentence closely to the previous one. By straightforwardly connecting sentences, the students could present their points of view clearly and ensure that readers can easily follow the viewpoints of the writers.

In body paragraphs, the students would prefer to use simple linear thematic progression as they prioritized accessibility by presenting their ideas in a manner that is easy for readers to comprehend without navigating intricate thematic connections. This approach indicates the students’ preference for simplicity over complexity.

In conclusion paragraphs, the students built each sentence based on the information in the previous one, which helps them to reinforce the main points without introducing new ideas. This strategy remains focused and leaves readers with a clear understanding of the core arguments in the essays.

However, the limited use of thematic progression with derived themes may imply that the students did not fully explore or develop complex ideas. This would indicate a gap in the student's ability to handle multiple ideas within an argumentative essay, which is essential for more sophisticated academic writing.

The results of this study showed that the least frequent thematic progression pattern was thematic progression with derived themes, which is in line with studies by Soleymanzadeh and Gholami (2014), Pavavijarn (2022), and Sari and Agustina (2022). Another finding in this study is that simple linear thematic progression occurred more frequently than thematic progression with a continuous theme in the students' essays. However, the finding contradicts the studies by Soleymanzadeh and Gholami (2014), Pavavijarn (2022), and Sari and Agustina (2022). Nearly half of the paragraphs in the students' essay follow thematic progression patterns by Danes (1974). One possible reason is that the students are likely to start the following sentences with brand-new themes.

Conclusion

Third-year English-majored students in this study tend to use new themes in the subsequent sentences in a paragraph, so nearly half of the paragraphs of students' argumentative essays show no thematic progression pattern. Accordingly, it is necessary to introduce the students to thematic progression patterns. This could help students structure their ideas more effectively in argumentative essays.

In the introduction, body, and conclusion paragraphs of the essays, simple linear thematic progression has the highest frequency, compared to thematic progression with a continuous theme and thematic progression with derived themes. It is suggested that teachers should encourage students to develop more layered arguments using thematic progression with derived themes. The teachers should have students analyze texts that incorporate different thematic progression patterns, allowing students to observe how complex ideas are developed and interconnected.

This study examines thematic progression in 25 argumentative essays, so it is impossible to generalize this finding to all the essays written by third-year English-majored students. Future research should analyze a larger sample of argumentative essays across different classes and schools to provide a more comprehensive understanding of thematic progression patterns used by third-year English-majored students and allow for more reliable conclusions about their writing practices. The study results hope to help teachers use thematic progression to give feedback on coherence in students' essays and tailor lessons to improve students' coherence by using thematic progression patterns.

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Biodata

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Exploring the Impact of Mobile-Assisted Language Learning (MALL) on the Autonomous English Learning of EFL Sophomores: A Case Study

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ABSTRACT

Keywords:

autonomous learning,
MALL, mobile,
technology

This study explores the use of Mobile-Assisted Language Learning (MALL) among sophomore English majors at a Vietnamese university, focusing on their engagement, perceptions, and its impact on their autonomous English language learning. Specifically, it identifies commonly used mobile devices and applications, analyzes the impact of MALL on students' language competencies, and examines how students perceive the role of MALL in their learning autonomy. Data were collected from 150 sophomores via a questionnaire, revealing that smartphones and applications such as Duolingo, ELSA Speak, and YouTube were the most popular tools for improving vocabulary and listening skills. The findings suggest that while MALL offers significant benefits, such as accessibility and convenience, students also face challenges, including distractions and limited pedagogical explanations. Despite these drawbacks, MALL was positively perceived by students for enhancing their language proficiency and fostering independent learning. The study recommends further exploration into integrating MALL with blended and flipped classroom approaches to maximize its advantages in English language education.

Introduction

Technology has profoundly impacted traditional learning methods in the rapidly evolving education landscape. Once confined to the classroom and specific schedules, the concept of acquiring knowledge has transformed with the integration of digital tools. Today, technology and education have merged, modernizing learning methods and creating new opportunities for students. Among these advancements, MALL has emerged as a significant area in foreign language education, driving transformation in how students approach language acquisition. This integration of mobile technology has expanded learning opportunities, reshaped learning styles, and altered the strategies employed in language teaching.

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Researchers such as Pourhossein Gilakjani and Sabouri (2014) emphasized that technology enables learners to manage their own learning processes, providing access to a vast array of materials outside the control of traditional instructors. With mobile devices such as smartphones, tablets, and laptops, learners can now access study materials conveniently, anytime and anywhere. This level of accessibility not only encourages active learning but also fosters greater autonomy in seeking and acquiring knowledge. Studies have demonstrated that MALL can significantly facilitate learning and improve learners' language proficiency (Baek & Lee, 2018; Kassem, 2018; Mozes, 2019; Perez Paredes et al., 2018; Zaki & Yunus, 2015). However, while MALL offers these benefits, the degree to which it supports academic autonomy still needs to be explored and warrants further investigation.

This study aims to explore the application of MALL and its impact on the autonomous learning of second-year English majors at a university. Specifically, the study seeks to identify the types of mobile devices and applications that students prefer and regularly use in their self-study efforts, offering insights into which technologies are most effective for language learning. Moreover, the study further aims to identify the specific knowledge and skills that students can develop through the implementation of MALL, focusing on the amount of time they spend learning with mobile resources and how they use them to improve aspects of their English proficiency, such as vocabulary, listening, and speaking skills. Finally, the study explores students' perceptions of MALL's role in enhancing their self-study practices and foreign language proficiency. By examining students' experiences and evaluations of MALL, the research provides valuable insights into how these technologies can motivate learners and improve their learning outcomes.

The findings of this study are expected to contribute to a deeper understanding of the current state of autonomous English language learning with MALL resources and inform the adaptation of teaching strategies to support independent learning better using mobile devices. Furthermore, as technology continues to evolve, the inclusion of digital and mobile elements in English language education should be seriously considered to keep pace with advancements. The students' evaluations in this study offer practical and theoretical contributions, providing a foundation for further integration of MALL into language teaching and learning in today's increasingly technological society.

Literature review

Definitions of key concepts

MALL

According to Kim and Kwon (2012), since Chinnery (2006) first coined the term mobile-assisted language learning (MALL), the use of mobile devices to support language learning has grown rapidly. Despite being classified as a subset of mobile learning and computer-assisted language learning, Kukulska-Hulme and Shield (2008) highlighted the distinction between MALL and CALL. The key difference lies in MALL's utilization of personal and portable devices, which offer an alternative approach to learning and “continuity or spontaneity of access and interaction across different contexts of use” (p. 273). Furthermore, MALL can be viewed

as a language learning variant that incorporates applied mobile learning (Dağdeler et al., 2020). As defined by Rodríguez-Arancón et al. (2013), MALL refers to “a teaching and learning methodology that uses mobile phones or other handheld devices with some form of wireless connectivity, such as phones, PDAs, and tablets, among others” (p. 1190). In addition, O'Malley et al. (2005) defined MALL as encompassing “any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies” (p. 6). Therefore, MALL is a creative and fun way to learn a new language (Azar & Nasiri, 2014). It is seen as a convenient way to help learners of English as a foreign language (EFL) improve their studies. Moreover, MALL is considered an excellent solution to the time and place-related constraints of foreign language learning (Miangah & Nezarat, 2012).

Learner autonomy

The term "learner autonomy" has been around for a long time and is no longer a stranger in the education industry (Jaelani & Adung, 2022). Educators and experts have discussed this term in various concepts in their research studies. Pichugova et al. (2016) considered Henri Holec the father of learner autonomy, as he first introduced this term in 1981. In Holec's view, as cited in Teng (2018), "learner autonomy is the ability to control one's own learning." He also defined the choice of objectives, defined content and processes, selected methods and processes, supervised the acquisition process, and evaluated learned content as part of learner autonomy. Additionally, similar to student-centered learning, autonomous learning requires students to take an active role in their learning whenever they are. Teng & He (2015), in other words, then defined learner autonomy as “a learning environment in which students learn how to set priorities, decide when and where to study, and pace their learning”. Learner autonomy is also considered the students’ ability to independently make their own organization, prediction, and management to achieve their specific goals in the learning process (Jaelani & Adung, 2022).

Results of previous studies

Common MALL devices and resources used in learning

Mobile phones

Baleghzadeh and Oladrostam (2010) stated the results of previous studies by various authors on the effectiveness of mobile phones in language learning. Among them was a Japanese study investigating mobile phone use in education (Thornton & Houser, 2005). In this study, English vocabulary lessons were delivered to learners’ mobile phones via SMS, and a website was developed to explain English idioms, which students can connect to via phones using 3G. The results showed that mobile phones were popular among students, and learners were willing to read texts on the small screen of their mobile phones. Thus, mobile phones have been found to be effective for foreign language learners. In another study, they were stated to provide learners with opportunities to express themselves in various situations (Sole et al., 2010). Students must use their mobile devices to report assignments outside of class, and mobile devices have also helped learners be engaged and interact better. Besides, contextual learning can be promoted by using mobile devices. In this way, information can be acquired at the learners’ own locations in a manner that suits their needs. According to the findings of Benlaghrissi and Ouahidi (2024)

Jawad (2024), and it was determined that the utilization of mobile phones has a notable effect on bolstering students' self-assurance in their listening and speaking abilities. In the study, a group of students were required to chat in Indonesian on their mobile phones. The research findings indicated that they were all satisfied with their privacy and freedom when using their mobile devices. Additionally, teachers can listen to students' conversations, which helps them better identify each student's difficulties. These findings have shown the astonishing effect of mobile phones on improving language skills.

Quizlet

Recently, Kassem (2018) mentioned in his research paper that a website named Quizlet, which uses web-based flashcard programs, has become a popular tool for facilitating students' vocabulary learning. This website allows users to interactively retrieve word meanings using a set of flashcards and a variety of learning tools. The online flashcard program is so popular because it increases students' vocabulary and tracks their progress. In addition, it uses multimedia to introduce new vocabulary, allowing students to learn at whenever and wherever as long as a stable Internet connection is available to them (McLean et al., 2013). Consequently, many studies have pointed out Quizlet's effectiveness in helping students improve their vocabulary. Specifically, Davie and Hilber (2015) carried out a research project to understand engineering college students' attitudes toward using the Quizlet app to learn vocabulary. A vocabulary test measures their ability to learn vocabulary. The study's findings revealed that students could significantly improve their vocabulary. In addition, students were found to be significantly interested in using Quizlet, as they found it a convenient and enjoyable learning tool. Likewise, Dizon (2016) confirmed that the use of Quizlet had a significant impact on the English vocabulary development of Japanese students.

YouTube

YouTube is one of the most popular resources for MALL nowadays. Functioning as a video-sharing website, YouTube enables users to upload, download, and share distinct types of videos. It is the most widely utilized video-sharing platform globally, encompassing a wide range of content such as movie excerpts, documentaries, comedy sketches, music videos, and more. From home to abroad, everyone can watch videos easily. Currently, many people prefer to learn through videos because they can motivate learners and make them feel as if they are in the real world. This means language learning is contextualized naturally, allowing students to experience language authentically in a visualized way. YouTube has a lot to offer as an effective tool and as a source of free material for teaching and learning English, allowing students to learn English both inside and outside the classroom and explore different aspects related to the language such as the variety of English cultures and accents. A research paper by Boster et al. (2004, as cited in Alqahtani, 2014) mentioned that videos can increase students' attention and curiosity and that YouTube can be easily accessed by students from mobile phones or laptops, which they can use anytime in and out of the classroom. Learners are more motivated and eager to learn after watching the videos. In addition, visual aids have a greater impact on listening comprehension than text (Shaojie et al., 2022). Alqahtani's study (2014) showed that documentary videos improve students' listening comprehension because they can infer the meaning of words from the actions that occur in the videos they watch and listen to. When

students are exposed to real language spoken by native speakers, they also develop their motivation and enthusiasm when learning with YouTube resources. Therefore, using YouTube videos stimulates students' attention and interest in learning English independently. Similarly, Bravo et al. (2011) realized that videos can be used as an educational tool to improve students' motivation, and their findings revealed that students watched YouTube videos more than other means.

ELSA Speak

ELSA is an Android application that can be downloaded for free from the App Store or Google Play, which is developed with multiple functions to improve the learners' pronunciation with American accents by providing them with different exercises to pronounce words, phrases, or sentences correctly. It is designed with a microphone icon that allows learners to use it and practice speaking directly and immediately. Kholis (2021) performed a study on pronunciation assessments, including spelling words and reading texts. The author realized that by using ELSA Speak, the students were able to hear and imitate sounds similar to their native language, and the system could instantly receive students' recordings and edit them into an optimal version. In fact, students can effectively participate in the learning process and become more motivated when using the ELSA Speak App during pronunciation lessons. The ELSA Speak app provides features to help students learn a large number of English words and phrases easily and independently in their native language. In addition, it also provides practical functions to develop communication skills, self-study activities, and voice correction, which help students gain a greater understanding of the structure and pronunciation of English input, know the mistakes they made, and correct them directly. Therefore, Kholis (2021) indicated that the ELSA Speak app can successfully engage students in language learning. Tran and Vu's research on the use of the ELSA Speak app (2024) furthermore underscores the importance of creating an exceptional self-directed learning environment that empowers learners to take charge of their learning process and engage in critical self-reflection. The study also highlights the engaging and enjoyable nature of the experience, along with its potential to address challenges such as the need for conversation partners and concerns about social judgment.

Duolingo

Duolingo is another MALL application, a free language learning program designed for mobile devices. Learners can easily download it on their mobile phones for free from the App Store or Google Play. This application provides a fun and simple platform for learning different languages. According to Ahmed et al. (2022), Duolingo is one of the mobile language learning applications that can help people develop vocabulary knowledge in speaking as well as in communication almost anytime and anywhere, as long as they have a mobile device connected to the Internet. Learners can quickly absorb the amount of English knowledge they need according to their needs through this application.

Moreover, Duolingo has many outstanding features for users (Ahmed et al., 2022). Learners using Duolingo are motivated to learn through a series of tasks (Maulya, 2023). Duolingo makes learning English easier because it is designed like an advanced game program (Munday, 2016). Additionally, Duolingo allows anyone to take free language classes (White, 2014) and promotes

learning dynamics and the acquisition of new vocabulary (Ahmed et al., 2022). Therefore, Duolingo is an effective tool to enhance vocabulary in and out of language classrooms.

How MALL has been implemented to promote students' autonomy in learning English

As MALL has emerged as a pivotal tool in fostering learner autonomy in English language education, the integration of mobile technologies into language learning has shown students' increased control over their learning processes, as well as more engagement and self-directed learning capabilities. Primarily, MALL has been implemented through mobile applications tailored for language learning. Such apps as Duolingo and Memrise have been used to enhance speaking skills in EFL learners and it has been revealed that the gamified nature of these apps, combined with their accessibility, encouraged students to practice speaking independently and frequently, thus promoting autonomy (Jaelani & Adung, 2022). The apps also provided instant feedback, allowing learners to self-regulate their progress and address gaps in their skills. Besides, MALL has also been implemented outside the traditional classroom, where students can use mobile devices to supplement their learning in class. The flexibility of using mobile devices outside the classroom was found to allow students to set their learning schedules, fostering time management skills and independent study habits (Sato et al., 2020). Lai and Zheng (2018) similarly realized that when MALL was implemented through self-directed learning activities, such tools as podcasts, YouTube tutorials, and mobile dictionaries helped improve students' listening and reading skills. Moreover, MALL implementation has involved task-based learning that integrates real-world scenarios. For example, Alzubi and Singh (2017) examined Saudi undergraduates who used mobile devices to complete project-based tasks, such as creating multimedia presentations or engaging in peer discussions via mobile platforms. These tasks required learners to actively apply their language skills in authentic contexts, promoting autonomy and collaborative learning. Finally, collaboration has also been an essential aspect of MALL implementation. Stockwell and Hubbard (2013) emphasized that mobile devices enable peer interaction through tools like WhatsApp, Google Classroom, and collaborative note-taking apps. These tools have enabled learners to exchange ideas, provide feedback, and engage in group activities outside traditional classroom settings, fostering both independence and teamwork.

Impacts of MALL on autonomous EFL learning

In the implementation of MALL in EFL learning, there have also been several challenges that can impact its effectiveness in fostering autonomy. One notable issue is the potential for distraction. Learners using mobile devices for educational purposes may need help with other applications, such as social media or messaging platforms, which divert their attention from learning activities. Kassem (2018) highlights this challenge, noting that distractions can undermine learners' ability to stay focused and consistent in their studies. Additionally, the small screens of mobile devices and limited battery life can hinder prolonged study sessions, making it uncomfortable for learners to engage in extended learning (Metruk, 2020). Another challenge associated with MALL is the need for more detailed pedagogical support. While many MALL applications can provide answers and corrections, they often need more thorough explanations, confusing learners about their mistakes. This mechanical feedback can reduce the effectiveness of autonomous learning, particularly for students who need more structured guidance (Kassem,

2018). Furthermore, learners are highly dependent on Internet connectivity when using MALL applications, which can be a limitation in areas with poor or unreliable Internet access.

Despite these challenges, the benefits of MALL in promoting autonomous learning are considerable. MALL has emerged as a transformative tool in foreign language education, offering unique benefits that enhance learners' autonomy and self-regulated learning (Alzubi & Singh, 2017; Lai & Zheng, 2018; Sato et al., 2020) also emphasized that mobile technologies, when integrated effectively, can significantly enhance learner autonomy by providing access to diverse learning resources and enabling self-directed learning practices. MALL allows students to access language materials on their mobile devices at any time and in any location, which has been proven to promote learner independence. According to Jaelani and Adung (2022), Kukulska-Hulme and Shield (2008), and Zaki and Yunus (2015), MALL enables learners to take control of their own learning processes by providing them with flexibility and accessibility in how and when they engage with language materials, which is crucial for fostering autonomy, a vital aspect of successful language acquisition.

One of the primary advantages of MALL is its ability to support personalized learning experiences. Depending on their needs and preferences, learners can choose which language skills to focus on, such as vocabulary, pronunciation, or listening comprehension. Studies have shown that learners using MALL tend to demonstrate higher levels of motivation and engagement due to the customizable nature of the learning tools (Baek & Lee, 2018). The autonomy provided by MALL allows learners to make decisions about what and how they learn, leading to better learning outcomes (Teng & He, 2015). For example, as Nguyen (2024) investigated the use of online resources accessed via personal devices in the learning practices of English majors, the study reveals that students frequently utilize their smartphones and laptops for reading practice, particularly for engaging with leveled news content. This approach is viewed positively, with students noting benefits such as improved vocabulary acquisition through learning word families and collocations, enhanced reading skills through skimming techniques, and a broader understanding of current events. Furthermore, MALL encourages learners to take initiative, a key component of autonomous learning. Research by Little (2007) found that learners who exhibit more autonomy are more likely to achieve higher levels of proficiency in foreign languages. Besides, MALL applications such as Duolingo, ELSA Speak, and YouTube have provided immediate feedback to learners, empowering them to monitor their performance and make necessary adjustments. This real-time interaction enhances learners' ability to self-assess, an essential feature of autonomous learning (Davie & Hilber, 2015). The ability to self-correct through personalized learning applications reinforces autonomy by reducing reliance on teachers and allowing learners to progress in their language studies independently.

Additionally, MALL facilitates collaboration by enabling students to interact with peers and teachers via mobile platforms, creating a supportive learning environment that encourages knowledge sharing and discussion (Oz, 2015). MALL also plays a critical role in reducing learners' anxiety, especially in speaking tasks. Platforms that allow learners to practice their speaking skills privately provide a safe space where they can build confidence without fear of judgment from peers or teachers (Baek & Lee, 2018). This reduction in anxiety further promotes

autonomous learning by creating a more comfortable and engaging learning experience.

As for the development of language knowledge and skills, the application of MALL has been found to be effective for EFL students. First, vocabulary acquisition is one of the most enhanced areas, with applications like Duolingo and Quizlet providing interactive and personalized learning environments that support vocabulary retention and expansion (Davie & Hilber, 2015; Ahmed et al., 2022). In addition, pronunciation and speaking skills have significantly improved through apps such as ELSA Speak, which utilize artificial intelligence to give immediate feedback on pronunciation accuracy, helping learners refine their speaking abilities (Kholis, 2021; Baek & Lee, 2018). Besides, listening comprehension has benefited from MALL by integrating video platforms like YouTube, which offers learners exposure to authentic spoken language in diverse contexts (Alqahtani, 2014; Bravo et al., 2011). Finally, reading and writing skills are also supported by MALL, with such tools as Oxford Online English which provides structured lessons for improving grammar and writing fluency (Perez Paredes et al., 2018; Moura et al., 2020). These findings indicate that MALL is a comprehensive tool that enhances a wide range of language skills, promoting more autonomous and effective learning.

In conclusion, MALL has positively impacted the development of autonomous learning among EFL learners. Its benefits include increased motivation, personalization of learning, and greater opportunities for independent study. However, for MALL to be fully effective, educators must address the challenges it presents, such as distractions, limited pedagogical feedback, and technological limitations. With careful implementation and support, MALL has the potential to continue fostering autonomous learning and improving language proficiency among EFL learners in an increasingly mobile and digital world.

Roles of students' autonomy in improving their language proficiency

Learner autonomy involves self-inquiry to gain knowledge, reflected in how learners find and access valuable knowledge resources. This process can be mediated and optimized through MALL, in which a number of pre-existing contexts are set up to help learners improve their ability to interact in context and support language use so that knowledge can be easily gained by increasing understanding of the linguistic context of communication (Hunter & Cooke, 2007). In a study by Melvina and Julia (2021), the relationship between learning autonomy and English proficiency was investigated among Indonesian undergraduates. The results showed a strong positive relationship between learners' autonomy and language ability. Moreover, learner initiative has been considered by many researchers as an element that determines the learning process and the success or failure of foreign language acquisition. In other words, learner autonomy significantly contributes to foreign language proficiency (Melvina & Julia, 2021). In addition, Little (2007) emphasized the interdependency and integration between developing learners' autonomy and enhancing language proficiency. Therefore, learning autonomy should be considered as both an essential tool and an indispensable goal of learning. This means that proactive, hard-working, and organized students can adjust their training to achieve good grades and succeed in English language learning.

Gaps in the literature

There are several reasons why this study holds its significance. Firstly, many previous studies

have primarily focused on a specific aspect, such as vocabulary, grammar, or speaking, when exploring the application of MALL in foreign language learning. However, this study goes beyond that by demonstrating how MALL can be applied across various areas of English learning, including students' preferences in MALL application. Next, findings of the integration of MALL in students' "learning autonomy" serve as the foundation for teachers and students to find more effective ways to enhance students' self-study activities and limit the drawbacks that may exist. Finally, such issues have yet to be profoundly investigated in the context of current Vietnamese universities. Therefore, more detailed research is needed to examine autonomous learning through MALL among EFL learners at university, who are expected and required to perform such a significant amount of self-study and self-training time.

Research Questions

To fulfill the purpose of the study, the study was conducted to answer the following research questions:

1. What Mobile-Assisted Language Learning (MALL) resources have EFL sophomores used in their self-study for language development?
2. How have EFL students implemented MALL in their autonomous EFL learning?
3. How have EFL students perceived MALL in their autonomous EFL learning?

Methods

Pedagogical Setting & Participants

the study focused on second-year students studying in a Bachelor of English Language program at a university in Vietnam. This university trains English-majored students from various parts of the country, each with a different background in English. As part of the curriculum, students are required to improve their language skills and knowledge, including listening, speaking, reading, writing, vocabulary, grammar, and pronunciation. In addition to classroom instructions, students are tasked with self-study hours and are encouraged to spend considerable time improving their language proficiency independently. Mobile devices and applications are also used as learning tools; however, the effectiveness of their use and student evaluations of these resources still need to be determined. Given these factors, the author believes that it is appropriate to conduct a survey on the initiative of second-year students to learn English through MALL. The study involved 150 second-year English majors at the university, who were selected based on convenience sampling. This group of students was expected to have experienced MALL because they all possessed at least one mobile device connected to the Internet and were familiar with their self-study responsibilities. They were informed of the survey's purposes and their anonymity and were voluntarily invited to join.

Design of the Study

The study chose the quantitative method to ensure comprehensive findings for the issue. This approach was considered appropriate to the nature of the study and well-suited to the intended objectives. Using a quantitative approach, the researchers gained valuable insights into the

participants' learning autonomy and the specific advantages and challenges associated with applying MALL in foreign language education. To efficiently collect and analyze data, the researchers used Google Forms, which supports a variety of data collection methods such as online surveys, mobile surveys, and email surveys. This tool also allows for the rational processing of the data. Originally, the questionnaire was designed based on a review of the literature, which informed the researchers of the survey's constructs. Before being employed to collect data, an expert reviewed the questionnaire and piloted with two students to check whether there was anything that needed to be clarified or understood.

Data collection & analysis

A survey consisting of four different parts with mainly multiple-choice questions was distributed online using Google Forms. The final part of the questionnaire used a five-point Likert scale ranging from "Strongly disagree" to "Strongly agree" to assess the participants' levels of perception of the advantages and disadvantages of MALL in an autonomous learning context. The researcher used a variety of question formats, including multiple-choice, checkboxes, and grids, to collect the data. After that, the obtained data were calculated and analyzed with Excel to find the answers to the research questions. The results were then presented in figures to help visualize the findings and discussed in relation to those of previous studies.

Results/Findings and Discussion

MALL resources used in EFL sophomores' autonomous study

Mobile devices

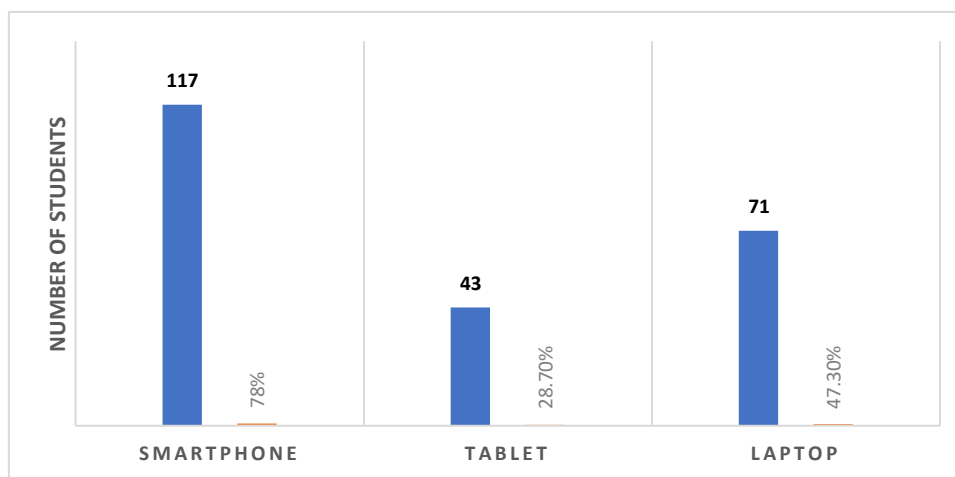


Fig. 1. Mobile devices used by EFL sophomores

This bar chart shows the mobile devices EFL sophomores use when studying English independently. Smartphones accounted for the highest percentage of the devices, at 78%. Meanwhile, laptops accounted for only 47.3%, while tablets accounted for the lowest percentage, at 28.7%. Therefore, smartphones were the most preferred device for students to self-study English. The fact is that every student has at least a personal phone, which is compact

enough for them to carry with them to study anytime and anywhere easily. Smartphones are usually installed with many features and built-in tools to support learning; learners need to download applications or enter web-based learning platforms to access knowledge content and learn instantly. Equivalent results from Thornton and Houser (2005) revealed that mobile phones were the most popular devices among students, and learners were willing to read texts on these gadgets' small screens. Mobile phones were also realized to be amazingly effective in improving language skills, allowing learners to express themselves in a variety of situations (Sole et al., 2010). Besides, they significantly improved students' confidence in their listening and speaking skills (Benlaghrissi & Ouahidi, 2024; Jawad, 2024). While laptops are essential and quite popular with university students, they are larger and heavier in weight than mobile phones, making them disadvantageous to carry or use in different places. In contrast, as all students not own only moments, this device was chosen less by students for use in their self-study activities. In conclusion, smartphones were the most popular and familiar devices students used for their autonomous training.

Mobile applications

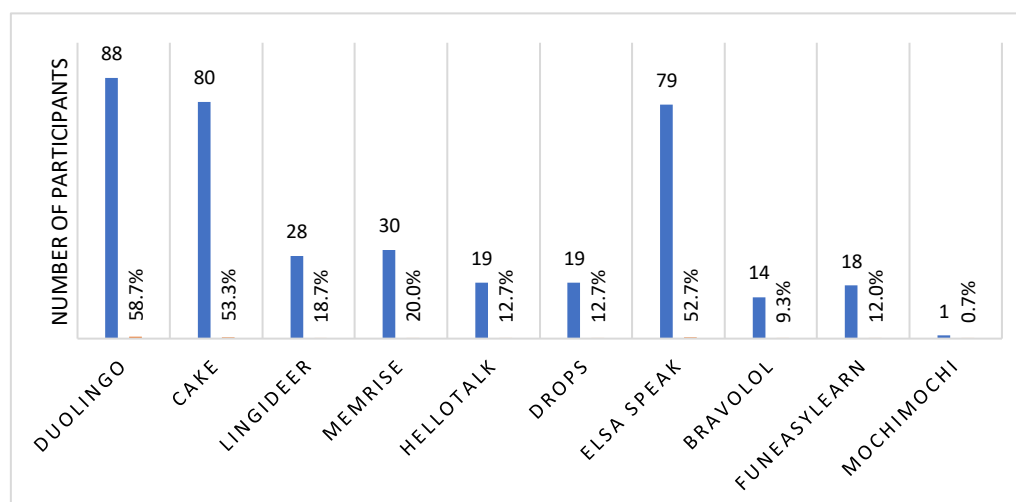


Fig.2. Mobile applications used by EFL sophomores

This bar chart illustrates the applications used by EFL sophomores in their self-study. Overall, Duolingo was chosen by the most participants (58.7%), while MochiMochi was used by only 0.7% of the students. Duolingo is one of the most popular and downloadable free language learning platforms. It has been trusted and chosen by many surveyed sophomores because it individualizes learning paces and levels for individual students and has lessons with repetition of vocabulary to help students learn and memorize the words. Similarly, findings in the study of Ahmed et al. (2022) showed that Duolingo had beneficial effects in such aspects as promoting learning motivation and acquiring new vocabulary. Duolingo can be considered a viable tool for improving vocabulary. Besides, Cake and ELSA Speak options accounted for a high percentage of 53.3% and 52.7%, respectively. Many students chose these two applications because they had interesting and user-friendly designs. Cake is created to form learners' reflexes when listening and speaking through short clips cut from famous movies. ELSA Speak is a beautifully designed application that helps learners improve their pronunciation as well as their

speaking skills. The system would record and deeply analyze users' voices in each lesson using A.I. technology. Then, it would point out the incorrectly pronounced sounds or words that need improving. In contrast, MochiMochi is also a vocabulary learning application with a prominent feature that announces the golden time to review vocabulary. However, learners often get bored with its interface as well as the learning method. Therefore, only one participant chose this application. In addition, there are other applications known and used by 10-20% of the survey students such as Memrise (20%), LingoDeer (18.7%), HelloTalk (12.7%), Drops (12.7%), FunEasyLearn (12%), and Bravolol (9.3%). In conclusion, most EFL sophomores have made use of Duolingo, Cake, and ELSA Speak applications to improve their language knowledge and skills autonomously.

Websites

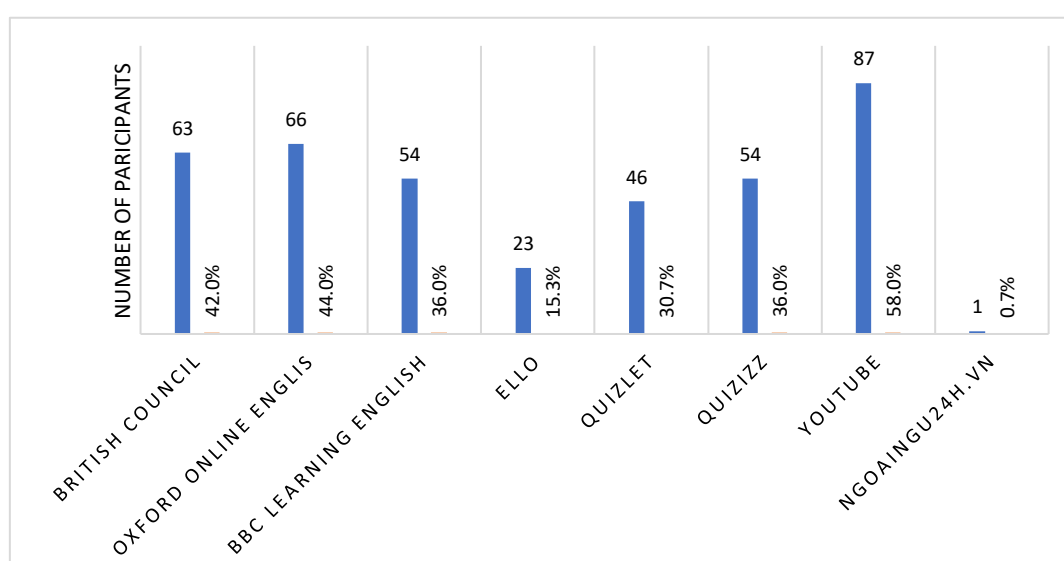


Fig.3. Websites used by EFL sophomores

YouTube emerged as the most popular website, and 58% of the participants used it for its diverse video content that aids listening comprehension and cultural exposure. Bravo et al. (2011) similarly found that videos significantly enhance learning motivation. Other websites like Oxford Online English (44%) and British Council (42%) were also widely used due to their structured lessons and exercises that target specific language skills. Websites such as Quizizz and BBC Learning English were used by a smaller portion of students, aligning with the findings of Perez Paredes et al. (2018), who highlighted that web-based platforms offer valuable resources for autonomous learning, especially in skills like reading and writing.

How EFL students have implemented MALL in their autonomous EFL learning

Time spent on autonomous English learning through MALL

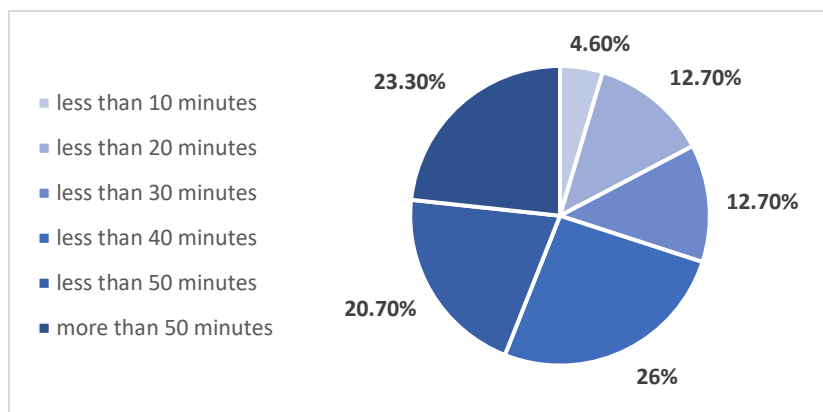


Fig.5. Time spent on daily autonomous English learning via MALL

From the results of the chart above, 26% of sophomores who participated in the survey spent more than 30 minutes a day studying English on their own. Also, one-fifth of them spent 41-50 minutes learning the language, and nearly one-fourth of them spent more than 50 minutes on this activity (23.3%). However, there are 30% of students allocate less than 30 minutes a day to practicing English skills and knowledge. Although students could study through MALL many times without any time and space constraints, it was realized that time allocation for this activity, in general, could be more adequate, especially for students majoring in the English language. Besides the universal and portable feature of MALL, which allows learners to autonomously use mobile devices for any subject at any time, anywhere (Zaki & Yunus, 2015), students should be more motivated to learn by themselves daily in a longer time span via MALL to develop their language proficiency.

Knowledge and skill most developed through MALL

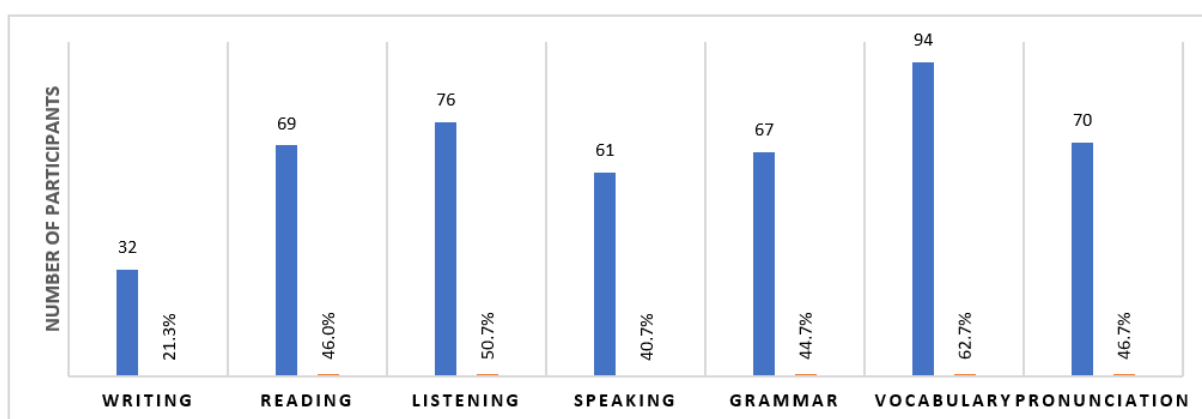


Fig.4. The English knowledge and skills EFL sophomores tried to develop via MALL

Figure 4.4 demonstrates how EFL sophomores applied MALL to improve their English skills and knowledge. Overall, it can be found that the majority of students (62.7%) used MALL to improve their vocabulary, with mobile applications offering interactive features, such as

flashcards, that support vocabulary retention. This is supported by Davie and Hilber (2015), who found that applications like Quizlet were highly effective in vocabulary learning. Besides, MALL was found to be applied in improving listening skills by half of the participants (50.7%), who accessed podcasts and videos, providing authentic listening material that is easily accessible through MALL platforms. This supports the findings of Alqahtani (2014), who noted that listening comprehension is greatly enhanced by MALL tools that offer contextualized, real-world audio and video resources. Therefore, learners can practice listening easily anywhere and anytime to improve listening skills via MALL implementation.

In addition, nearly half of the participants also used MALL to develop reading (46%), grammar (44.7%), and speaking skills (40.7%). MALL applications such as ELSA Speak and mobile platforms like YouTube helped learners practice speaking and refine their pronunciation, aligning with Kholis (2021), who emphasized the role of MALL in improving speaking through real-time feedback. However, only 20% of students used MALL for writing, as most mobile platforms focus on basic error correction rather than complex writing skills. This is in line with Moura et al. (2020), who found that while MALL enhances basic language skills, writing requires more comprehensive feedback than mobile platforms typically provide.

Students' perceptions of the application of MALL in their autonomous EFL learning

Benefits of implementing MALL in EFL learning

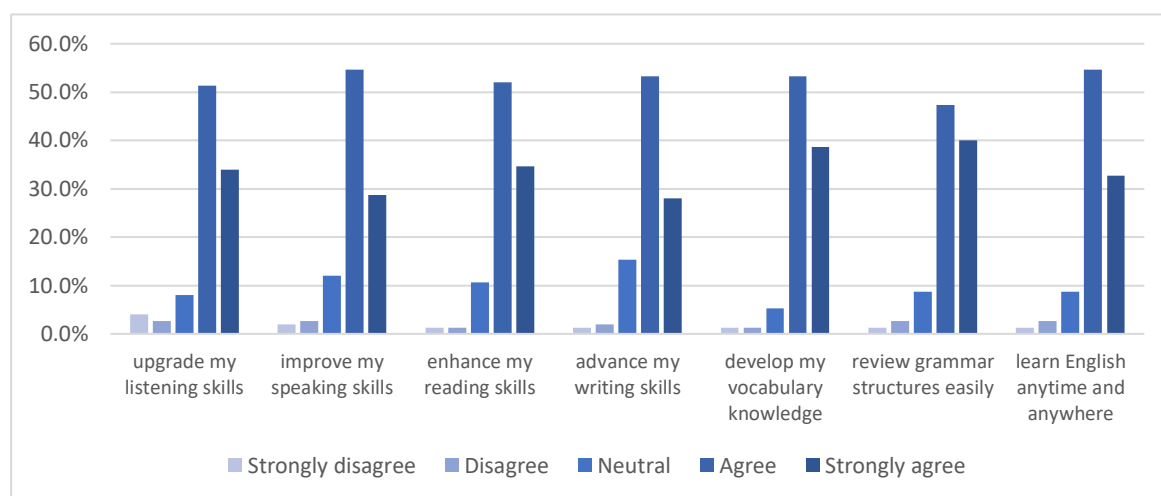


Fig. 6. Benefits of applying MALL in EFL learning

Figure 6 shows the benefits MALL has brought to the sophomores as they apply this method in their self-study of English. Overall, it could be seen that most students participating in the survey agree and strongly agree on the benefits of MALL in improving the four basic skills of listening, speaking, reading, and writing with 85%, 83%, 87%, and 81%, respectively. In addition, most of the participants found that MALL helped them develop a good vocabulary (92%) and review the grammar structures efficiently (87%). Additionally, it was acknowledged by most students (87%) that MALL allows them to learn English anytime, anywhere. In short, the results shown in this chart were similar to those of Mozes's (2019) study, which confirmed that implementing MALL in EFL learning brought many benefits and facilitated language learning.

Challenges of implementing MALL in EFL learning

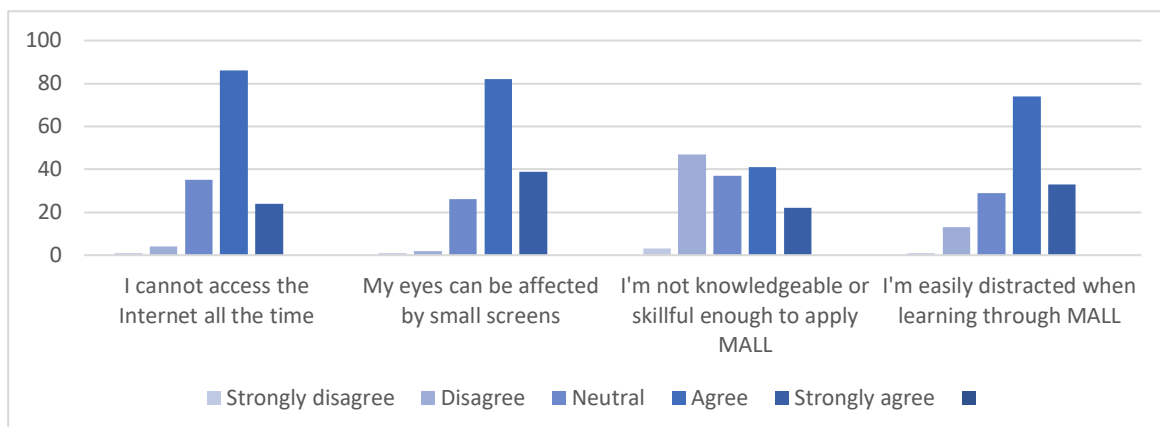


Fig.7. Challenges of MALL implementation in EFL learning

This chart demonstrates the difficulties second-year EFL students face when applying MALL to learn English by themselves. Overall, most of the students agreed and strongly agreed that they faced similar problems as follows: they could not access the Internet all the time (73%), it could affect the eyes because of the small screens (80%), and it made learners easily distracted during the learning process (74%). These issues were also mentioned in the study by Kassem (2018). However, when discussing the level of difficulty when applying MALL, there were varied opinions on this matter. While 32% of the students denied this was hard to implement, 44% confirmed MALL was not easy to apply, and 24% of the participants shared a neutral opinion. These differences indicated that the second-year students had various levels of knowledge and skills to apply MALL in their self-study activities. A remarkable number of students still needed to be proficient in technology and learning methods, which could be viewed as disadvantages that hindered their self-study through MALL. In summary, although MALL offered many benefits for students learning English on their own, many students revealed they were not ready for this implementation without any support from their instructors, and they still faced obstacles in this autonomous learning process.

EFL sophomores' general perception of MALL in autonomous English learning

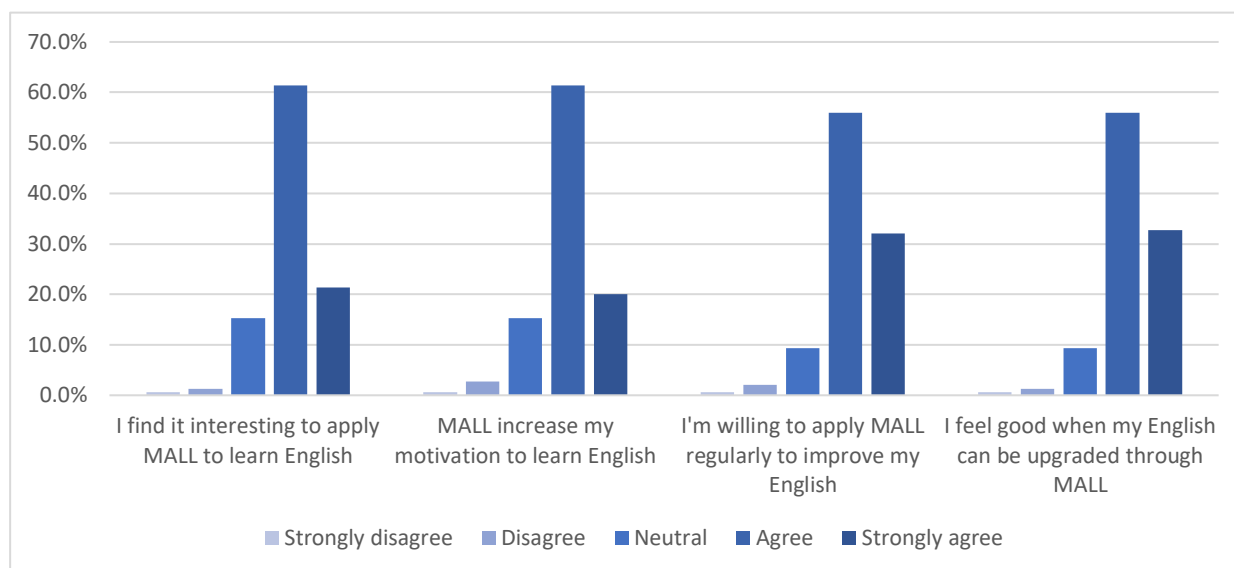


Fig.8. EFL sophomores' perception of MALL in autonomous English learning

Students' perception of the application of MALL in their self-study of English is shown in Figure 7. In general, students had a positive attitude towards their English self-study through MALL. A high percentage of students agreed upon all aspects. Eighty-one percent of the students found applying MALL in learning English interesting, and the same proportion stated that MALL increased their motivation to learn English. Besides, 88% of the participants expressed their willingness to sign up for MALL regularly to improve their English and shared a sense of satisfaction when they could improve their English with MALL. These findings align with the study by Mozes (2019), who asserted that MALL had motivated learners to develop their language acquisition abilities. In short, MALL motivated learners and brought forth many interesting benefits. However, effective learning through MALL heavily relies on learners' autonomy.

In conclusion, this study's findings have confirmed that MALL is a valuable tool for autonomous EFL learning, supporting vocabulary acquisition, listening comprehension, and pronunciation. However, its effectiveness depends on students' time management and their ability to overcome technological challenges. These results align with previous studies, which also found that MALL enhances language learning while posing challenges related to technology and distractions.

Conclusion

Based on the collected data, the majority of students have applied MALL in their autonomous learning, with smartphones being the most commonly used devices. These devices offer convenient access to a variety of mobile applications such as Duolingo, Cake, and ELSA Speak, which students frequently use. Websites like YouTube also serve as valuable platforms for language learning. MALL has been effective in improving students' language proficiency, particularly in vocabulary acquisition and listening skills. Vocabulary applications, in particular,

have been instrumental in helping students expand their vocabulary through user-friendly interfaces. In terms of learner engagement, many students reported positive experiences with MALL, indicating that it enhances motivation and encourages regular use. The findings suggest that MALL contributes to the development of essential English skills, although it presents some challenges, such as distractions and technological limitations.

However, this study has some limitations. First, it primarily focused on a single group of second-year English majors at one university, limiting the generalizability of the findings to other educational settings or age groups. Additionally, the study relied on self-reported data, which may introduce bias in terms of students' perceived effectiveness of MALL. The study should have also investigated the long-term impact of MALL on language proficiency or compared its effectiveness with traditional learning methods.

For future research, broader studies across multiple institutions and diverse learner groups would provide more generalizable insights into the use of MALL. Investigating the long-term effects of MALL on various language skills, especially writing, which was underutilized in this study, could also offer a deeper understanding of its effectiveness. Furthermore, future research could explore the integration of MALL into blended learning and flipped classroom environments to evaluate its role in complementing traditional teaching methods and enhancing overall language proficiency.

The findings suggest that integrating MALL into both teacher-led instruction and self-study could enhance language learning outcomes. Teachers could consider incorporating more mobile resources and providing guidance on effectively selecting and using MALL tools. Further research is recommended to explore the application of MALL in different learning contexts, including blended learning and flipped classrooms, assess its effectiveness across a broader range of learners, and evaluate its role in complementing traditional teaching methods and enhancing overall language proficiency.

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Biodata

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Utilizing Artificial Intelligence in Writing Feedback: Benefits and Challenges for First-Year Students at Hanoi University of Industry

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ABSTRACT

Keywords: Artificial Intelligence, writing feedback, potentials, challenges, benefits

This paper analyses the application of AI technology to the process of delivering writing feedback to first-year students of Hanoi University of Industry (HaUI). AI brings an effective solution to improve writing skills since one wants to receive individual and effective instruction. In this article, the authors discuss how there are opportunities for the use of AI to improve feedback quality, time, and flexibility in line with the various AI tools and platforms that cater to young writers. It also explores the implications and difficulty of incorporating AI-driven feedback systems for the classroom, like having issues with technology use and the roles and participation of teachers. This research uses qualitative data collection techniques, interviewing 10 teachers and focusing group discussions with 50 students majoring in business. Drawing on the analytical framework outlined above, this article examines the possible benefits and limitations of AI written feedback applicable to HaUI and offers directions for teachers and administrators in comparable contexts who want to utilize AI technology for writing feedback to support learners.

Introduction

Technological development has continued to progress at very high rates, with developments in AI, for instance, changing the way students receive feedback on their work in various elements of education. Hanoi University of Industry (HaUI) is one of the particular contexts in which the requirement to offer professional teaching of writing is rather acute, especially in the framework of English Occupational Purposes (EOP) courses for first-year students. These students, originating from various fields, are challenged by the need to write English as a second language and, at the same time, learn specific interpersonal communication skills essential in their respective areas of practice. Because writing is an area that needs constant feedback, they must get timely, personalized, and practical feedback so as to help them enhance their

achievements in their academic needs and their future careers.

At present, writing feedback at HaUI is mostly provided by the teachers in the classroom during the discussions and in the written assignments submitted through the university learning management system (LMS), eop.edu.vn. However, due to increased class size and limited resources, students do not receive feedback as they desire, and the feedback process takes time and may not be as relevant as when students need to enhance their writing ability. That is why embracing AI-assisted tools can be the answer to this issue. AI technologies in the form of feedback writing assistants have the ability to improve the quality and speed of the feedback process by delivering real-time, individualized feedback to student's specific areas of weakness in writing.

However, with regard to using AI in feedback, there are the following concerns: disparity in technological competence among students and teachers, and teacher involvement and control. These problems need to be solved effectively so that the application of the AI tools will not pose a challenge in the HaUI educational setting. This article also tries to raise the possibilities and concerns of using such feedback tools for the first-year students at HaUI with AI's support and discuss the possibility of applying these tools.

Though various forms of AI tools and technologies such as Grammarly or Turnitin have already entered the educational processes all over the world and a number of studies state their use for enhancing the educational process and outcomes, little is still known about their effectiveness and applicability in the contexts of EOP programs in Vietnamese universities including HaUI. The current research also focuses on enhancing the students' general writing accuracy and rarely lacks proper consideration for the EOP first-year students' specific areas of concern, including technical-business writing. Furthermore, there is a lack of information concerning various issues that teachers encounter when working with AI feedback and traditional assigning of lessons, as well as individual students' needs in big, multicultural classes. This research aims to fill these gaps through AI applications in the context of HaUI and its EOP program. It also offers information and suggestions to teachers and administrators who wish to use AI to improve their students' writing performance.

Current English Teaching and Learning Framework at HaUI

As a pioneer in teaching English for Occupational Purposes (EOP) for technical and economic students in Vietnam, HaUI has carried out the EOP project since 2015 and has gained some achievements. At this university, the flipped classroom model is applied to all EOP classes of eight major groups including Automotive Technology, Business, Chemical Technology, Electrical and Electronics Engineering, Garment Technology and Fashion Design, Mechanical Engineering, Information Technology, and Tourism and Hotel Reception.

Eight non-majored English groups at HaUI study EOP in 6 semesters, from the first year to the third year. Students have to complete the EOP curricula in 30 credits. For each module, students study 5 credits equivalent to 75 periods, of which 40 are taught in face-to-face (F2F) classes with teachers and 35 are self-study on eop.edu.vn. An online lesson includes the following

contents: Vocabulary, Grammar, Listening, Reading, Writing, Pronunciation, and Speaking. Each section is designed with topic-related exercises for students to learn and practice before joining F2F classes. During the F2F classes, students are asked to apply the knowledge and skills they have learned online to perform class activities in groups, pairs, and individually. Before class, students study online on the website [eop.edu.vn](#). They learn key language knowledge in Vocabulary and Grammar and practice language skills in Listening, Reading, Writing, and Pronunciation. Students learn pronunciation and how to write words in the Vocabulary section. For the Grammar part, students learn tenses, forms, usages, grammatical structures, and useful expressions related to the topic of each unit. At the end of the Vocabulary, Grammar section, students can test their online language knowledge through section tests. For Listening and Reading skills, students practice various tasks such as listening and reading for main ideas or detailed information. Students can practice writing skills at different levels, from writing simple to complex sentences, paragraphs, emails, letters, etc. In addition, students have to complete their writing tasks and speaking videos and then upload them on the online learning site so that teachers can give comments and marks. Besides, students have 2 F2F classes (100 minutes per class), which is equivalent to 4 periods each week, with teachers and other students to practice their English-speaking skills. When studying each unit, students are required to understand the overall objectives and the objectives of each lesson. The curriculum consists of 8 units with two lessons for each. A F2F lesson is designed from 4 to 5 activities with one warm-up activity and 3-4 learning activities. After class, students continue to log in to the learning site [eop.edu.vn](#) to complete the remaining online tasks like section tests, unit tests, and writing and speaking assignments. Teachers use the level of online completion and the scores of these online tests to determine the conditions for students to take the end-of-term exams.

Potential Benefits of Using AI for Writing Feedback

Improving Feedback Quality

AI applications have gradually been identified as useful in offering timely, individualized, and positive feedback to students' writing. These systems employ natural language processing (NLP) techniques to deal with most standard grammatical, syntax, and style problems. Tran (2024) stated in her study that with the help of AI tools, students progressed much in coherence, cohesion, and lexical resources, as building up knowledge of vocabulary and connectors and that the application of an AI-powered writing assistant improved students' overall writing quality and helped them to organize their thoughts. According to the study by Cahyono and Kurniawan (2020), the use of AI to enhance feedback systems, such as fast, accurate, and contextual feedback, enhanced the quality of writing among students. Additionally, Liu et al. (2020) also outlined that alongside identifying the errors and correcting them, AI tools such as Grammarly or ProWritingAid can suggest more adequate options and provide better awareness of language processes. Other researchers, Klein et al. (2019) also discussed that using AI is more helpful in improving the quality of feedback by stressing positive rather than negative

feedback.

Enhancing Timeliness and Scalability

Another impressive advantage that AI has brought to the educational process is the possibility of giving instant feedback to a large number of students, which would not be easy for a teacher. This scalability is particularly helpful in mitigating the amount of work teachers have to do regarding grading, they can concentrate on more engagement with students. In the same study, Xiong et al. (2020) emphasized that large classrooms reap the advantages of AI as the immediate feedback helps students learn faster while it does not pressure the teacher to respond immediately. Moreover, Cahyono and Kurniawan (2020) explained how AI feedback can be used in relation to the level of education with regard to delivering feedback efficiency depending on the number of students in the class.

Facilitating Skill Development

Technology also aligns student learning through the usage of intelligent learning platforms that monitor and track the student's performance and, therefore, adjust learning needs. Nazaretsky et al. (2022) established that such adaptive systems can follow the learning progress of individuals, and thus present learning paths that fit the student's abilities. This approach becomes useful in helping students develop specialized skills since it helps to identify specific areas that students need to work on. In the study by Miranty and Widiati (2021), the participants who learned from AI learning tools said they achieved better writing scores than those who received traditional feedback.

Supporting the Flipped Classroom Model

The use of the flipped classroom, in which the core content is delivered outside of class, and class time is spent on interactive activities, is built on the support of AI tools that can deliver feedback outside of school hours. The use of AI has improved students' writing practice by enabling them to edit their work before discussion in the classes. Huang and Yang (2023) indicated that the flipped classroom enhanced by the use of AI has the benefits of promoting higher student autonomy and readiness. As Li and Peng (2022) pointed out, the flipped class environment requires students to use AI in writing practice outside the classroom while actual classroom time is dedicated to higher-order thinking skills.

Challenges and Considerations in AI Implementation

Technological Accessibility

The greatest difficulty that one finds when using AI for writing feedback is that the technology is not available to everyone. This is because many universities, colleges, and students do not have proper infrastructure like good Internet connection or are equipped with the latest hardware to efficiently use AI in education. Huang et al. (2019) found that the disproportionate adoption of this technology can expand the gap in learning opportunities and limit the flow of timely and quality feedback to some learners. In addition, the development of information technologies and the level of digital competence of students and teachers act as important conditions when using AI tools. As highlighted by Lo and Hew (2023), if students or teachers fail to discover such technologies, they will fail to apply the AI tools to their maximum capability. To eradicate such inequalities, there is a need to ensure that the students and teachers

are given enough support and training for the fairness of technology that should complement the writing abilities of students and teachers through AI.

Teacher Involvement and Control

Despite the fact that AI gains the capacity to automate and improve specific properties of feedback, it is still important to control the ratio of AI-generated and human feedback. There is a feedback loop where teachers are able to interpret, contextualize, and individualize what they are doing and what AI cannot. According to Bali (2017), the excessive use of AI in a classroom results in feedback that eliminates personal factors, making students lose the essence that a teacher provides with certain authority and human feeling. Thus, the role of AI should be focused on supporting the teacher's activity as a source of feedback.

The other challenge is a lack of readiness for teachers to properly prepare for the utilization of AI in their profession. Some possible reasons why some teachers may be reluctant to use AI: low self-efficiency in applying such technologies or concern that the feedback process will be wade. Luckin et al. (2016) emphasized that AI only succeeds when the teacher training programs cover its advantages and disadvantages. Teacher practices of flexibility in AI-supported learning environments encompass technology-mediated competencies and approaches to integrate AI feedback into conventional practices. The study also hypothesized that the best way to incorporate AI is when teaching decisions are in the teacher's hands, and AI is only assisting the teacher in delivering instructions.

AI Tools for Writing Feedback

Popular AI Tools for Writing Feedback

Currently, other AI-based applications such as Grammarly, Turnitin, and WriteLab are actively used in the educational process in order to give feedback on writing. Grammarly is one of the leading tools, and it utilizes NLP in order to detect grammatical, punctual, and stylistic errors and offers suggestions to change them. Among the benefits presented by Sanosi (2022), the application proved that it is useful for students to determine areas they need to avoid while learning how to write more quickly and fluidly. Usually associated with aspects of plagiarism detection, Turnitin now offers an AI writing feedback service capable of boosting academic integrity and organization of papers. Owan et al. (2023) pointed out that utilizing AI components of Turnitin, such as Feedback Studio indeed assists students in comprehending and improving their academic written output. Another considerably less popular but still used AI to provide feedback on readability, interest, and variations of sentences is WriteLab, which proved especially beneficial for deeper analysis of certain texts, as seen by Dong (2023).

All of these tools give feedback on something as simple as the correct and wrong usage of some grammar rules or as complex as style and content choice and, therefore, are suitable for almost any learning environment.

The Use of AI Tools in HaUI's Context

At HaUI, the first-year students who have enrolled in the EOP program will benefit greatly from the application of these AI tools. The specific needs of EOP students, such as pointing out

weaknesses in business communication and technical writing, could be addressed by Grammarly and Turnitin. For example, Grammarly's built-in prompt for the necessity of improving formal writing can give instant feedback about the mistakes students make regarding sentence structure and word choice, which are crucial elements in business writing. Maudilidina and Wibowo (2022) agreed with the idea that AI tools like Grammarly enhanced the students' technical writing skills and offered them feedback that corresponded to their level.

Furthermore, plagiarism detection tools are one of the key benefits for an academic institution such as HaUI because students have to learn appropriate approaches to research and citations. Owan et al. (2023) pointed out that students can obtain original work by integrating Turnitin with an AI feedback assistant to help them understand academic writing guidelines.

In this specific context, these AI tools can be used in practice to provide the ongoing writing development of EOP students at HaUI through writing assignments and projects. For instance, Grammarly can be implemented into daily writing activities and essay assignments where students write their home assignments and, in return, receive feedback concerning such writing criteria as task fulfillment, vocabulary, grammar, and richness of ideas within minutes. This could save a lot of time that teachers spend marking simple mistakes, and give teachers more time to teach values such as critical thinking and structure of a good argument. As stated by Laflen (2023), the active utilization of AI feedback as a learning material contributes to the student's ability to write independently of the teacher to revise their papers before the submission of their final copies.

In addition, Turnitin's Feedback Studio could be also used during the development of bigger projects like research papers to facilitate formative comments on the further arrangement of the content and corrected citations. Alharbi and Al-Hoorie (2020) found that students who employed Turnitin to submit several versions of the work were inclined to make deeper changes, proving enhanced comprehension of academic writing rules. This is in line with the current HaUI's first-year EOP student's needs, where a majority of them finds it hard to write good and properly formatted technical reports.

Methodology

Design of the study

A qualitative research method is employed to explore the teacher and student perceptions of AI technologies for writing feedback. The research aims to find out students' attitudes towards the advantages, difficulties, and outcomes of AI-based feedback in writing assignments; this will be achieved by administering semi-structured interviews and focus group discussions.

Participants

The study includes 10 EOP teachers and 50 students majoring in business at HaUI who are taking EOP courses. It was done according to their experience using AI-based feedback tools, ensuring that they have diverse exposure to AI in education, knowledge, and academic fields.

Data collection

The interviews were conducted with the teachers and students separately in order to understand their viewpoints, attitudes, and experiences with using AI to provide feedback on students' writing assignments. The interviews were unstructured, so participants could state only those opinions that correspond to the major aspects, including the quality of feedback, the interaction with AI, and its function in skill development. Teachers and students participated in two separate focus groups so that they could involve peers in their discussion and reflection on the situation. These conversations generated a rich source of qualitative data and group learning about people's use of AI tools for writing feedback.

Findings and discussions

The results of this study revealed a range of perspectives about the use of AI technologies for generating feedback on writing at HaUI and the benefits and challenges of its implementation in teachers' and students' experiences. From focus groups and semi-structured interviews, more detailed insights are received regarding these tools and their impacts on writing.

Perceived benefits of AI-Driven feedback

Both the teachers and students mentioned that the speed and efficiency of the feedback that the AI gives is an issue. Some participants were pleased to know that AI tools like Grammarly or Turnitin enable immediate rectification of simple mistakes such as grammatical, spelling, or punctuation. This, in turn, helped students to focus more on what they intended to achieve. In an interview, one student stated:

“I can enhance my writing much faster due to using Grammarly since I receive suggestions immediately on the mistakes I make when typing. I do not have to wait for the teacher to correct every small mistake.”

In addition, teachers also found that using AI tools lightened their workload and helped them pay closer attention to the broader features of students' writing. A teacher commented:

“The AI corrects all the easy things like grammar and spelling which helps free me up to look at things like how the actual argument being made and critical thinking process evidenced in the students' writing.”

This is in accordance with the overall objective of applying AI to complement rather than replace human feedback, as it enables teachers to give more personalized feedback on the higher-order writing skills.

Challenges and limitations of AI feedback

The study also identified significant factors that hinder the use of AI in producing comments. Another issue for concern amongst the teachers was that the AI tools were good at correcting simple grammatical errors but lacked the depth and insight to give useful comments on many high-level assignments, such as logic, tone, and creativity. Some teachers reported that after writing and receiving feedback, the students might believe that writing simply corrects grammar while ignoring the enhancement of critical thinking and persuasive skills. One teacher reflected during a focus group discussion:

"AI systems are unable to fully comprehend the nuances of an argument or creative writing. They work well for technical fixes, but not for the more complex abilities we are attempting to impart."

Students also found that the use of AI was limited when faced with more complicated writing problems. One participant said:

"The AI is helpful when I make little errors, but occasionally I feel like it does not fully grasp what I am saying. It provides grammatical comments, but not my thoughts."

This underlines the need for constant, active teacher involvement in the writing process to ensure that student needs are met fully by providing more than grammar corrections.

The impact on student engagement and skill development

Another important result is how the usage of AI feedback affects the writing interest and improvement of the students. Several students said they felt more confident in their writing because they could handle technical problems without assistance. For example, a participant explained:

"I feel more confident using the AI tool because it tells me what is wrong and how to fix it. Writing helps me become more self-sufficient."

Other students also indicated that they felt more confident and took more responsibility for their writing edits than before. Teachers described such reliance on AI only in terms of potential modification on the surface level. According to a teacher:

"Students are just correcting what the AI has identified while they may have other problems with their writing, failure of argument or coherence for instance."

This means that although students become more independent when using AI tools, teachers are responsible for helping students write with more reflection and analysis.

The role of professional development for teachers

The results reveal that an emphasis on professional development should be considered for AI tool implementation. However, most teachers interviewed admitted that they were not ready to take advantage of AI in the classroom. One teacher remarked:

"The use of AI tools is useful, though I think that I require further professional development on how I may incorporate them into learning and teaching effectively."

Recognizing that fact, HaUI hosted a series of workshops for professional development that addressed the interpretation of AI-generated feedback and how to apply it to the current curriculum. These trainings ensured that teachers gained confidence in their capacity for using AI. As one participant shared:

"After the training, I felt more prepared to employ AI technologies in addition to my own comments, as one participant noted. It improved my ability to balance the two kinds of feedback."

This suggests that for AI technologies to be effectively adopted in practice, teachers must be trained to ensure that the applications do not complicate the teaching process.

Continuous evaluation and feedback loops

The final idea that came out of the discussions was the importance of constantly gathering feedback to ensure that AI technologies remain on course and useful. All respondents highlighted the fact that evaluations of the tools and their functionality should be done frequently. As AI technology advances, one teacher proposed that:

“We continue to evaluate these technologies. What functions well today might not be effective tomorrow.”

One participant remarked:

“It is important to keep improving the AI tools based on our feedback, so they can help us better in the future. Students continued to endorse the idea of continuous evaluation.”

In the long run, with continuous evaluation of the student's performance and feedback from HaUI teachers, the application of AI technologies will remain relevant in improving the quality of the written comments.

AI tools integrated into the HaUI writing feedback process have several advantages, particularly in terms of writing efficiency and students' decision-making on technical corrections. However, the results also reveal more concerning issues, especially in relation to higher-order writing skills. It is, thus, important to view AI feedback as a complementary set of feedback to human feedback. The key factors affecting the applicability of AI tools in writing encompass the ongoing assessment of these tools and the development of current practices. These interventions put HaUI in a better place to leverage AI technologies while at the same time ensuring the balanced development of students' skills.

The results of the work are consistent with Cahyono and Kurniawan (2020) and Xiong et al. (2020), who clearly defined the benefits of AI feedback on the quality and speed of feedback to writing. The study by Duong et al. (2024) found several important effects of using AI in writing education for both students and teachers. Students receive feedback and comments quickly so they can complete their assignments on time and effectively. Not only does students' learning productivity increase, but their grades also improve. As AI technology develops, it will help students and teachers speed up the academic writing process. Like their research, this study found the students benefited from the real-time feedback that they received from the teacher, which made their writing process much more effective and interesting.

However, the study also has some similar limitations to the one by Bali (2017). All the teachers interviewed from HaUI raised issues related to AI's feedback deficiency on complicated tasks, including logical arrangements and creativity.

Conclusion

Applying AI techniques to provide writing feedback at HaUI can enhance the timeliness and effectiveness of feedback and improve the educational process of the students. Due to timely, personalized, and accurate feedback, AI technologies can fix the most common writing problems, such as the poor usage of grammar, syntax, and style. They can also be designed for a large number of students. However, such an implementation must meet certain plans, especially on aspects such as teacher involvement and control.

Teachers require the positive aspects of using AI in giving feedback, along with the advantages of personalized teaching during face-to-face lessons. However, technical considerations must still be made to ensure that all students have the same opportunities to access AI-supported resources regardless of their level of digital literacy or infrastructure.

More research should take into account the effects that AI will have on students' writing in the long-term use. Studying the evolution of the interface between AI and the teaching of writing is also important as this technology advances. More research is still required in the identified research areas to enhance and enrich its impact on teachers and students and define the best way to use AI in the educational sector.

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Integrating TPACK to Enhance Quality Assurance in General English Teaching: A Case Study in Higher Education

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ABSTRACT

This paper explored the integration of Technological Pedagogical Content Knowledge (TPACK) to enhance the quality assurance of General English instruction within higher education. Despite the recognized significance of TPACK for ESL teachers, scant research exists on its application, specifically in ensuring the quality of General English teaching. The study in a public university focused on a division of General English consisting of 61 lecturers. Data was collected using both quantitative and qualitative methods, including a questionnaire adapted from Schmidt et al. (2009) and an interview combined with class observation. The findings revealed that although most lecturers self-rated their TPACK competence at a high level, a small percentage of them integrated technology into their teaching. Therefore, lecturers are recommended to participate in peer observation to share authentic applications of their TPACK knowledge. Regular internal workshops should also be held to revive lecturers' TPACK skills. More significantly, lecturers have to attend external workshops on AI in TESOL and available TESOL conferences to improve their teaching skills in general. As for managers, incorporating TPACK competencies into teacher evaluations, particularly observation strategies, is recommended to recognize and encourage effective teaching practices. These comprehensive approaches can enhance the quality of general English teaching in this digital era.

Keywords: TPACK, quality assurance, General English

Introduction

The rapid digitization of society and economy has profoundly transformed educational landscapes, which requires a corresponding development in teaching methodologies. The

COVID-19 pandemic accelerated this shift, and the critical role of technology in education is revived. This event challenged teachers' technological competence. Researchers highlight teachers' struggles with student motivation, technical skills, and technological obstacles in online education (Pham et al., 2021; Kamal & Illiyan, 2021; Sangeeta & Tandon, 2020). To bridge this gap and enhance teaching and learning outcomes, this research investigates the integration of the TPACK framework into General English instruction at higher education institutions.

TPACK is a conceptual model encompassing technological, pedagogical, and content knowledge. It is increasingly recognized as essential for effective technology integration in education. Equipped with TPACK skills, English teachers are believed to significantly improve teaching quality and student engagement. Believing in the potential of TPACK to enhance the quality of General English (GE) courses, this study seeks to address two key questions: how do GE lecturers at the participating higher institution perceive their TPACK and how do they apply it in practice? Based on the findings, recommendations for further steps in a continuous development plan are proposed.

Literature review

Key concepts

Mishra and Koehler (2006, p. 1029) have enhanced the PCK framework by adding Technological Knowledge (TK), resulting in the TPACK (Technological Pedagogical Content Knowledge) model. They describe the TPACK model as "the foundation of effective teaching with technology." This model involves understanding how to use technology to represent concepts, employing pedagogical techniques that integrate technology to teach content effectively, recognizing the challenges or ease of learning specific concepts and how technology can address these, knowing students' prior knowledge and theories of epistemology, and understanding how technology can build on existing knowledge and develop or reinforce epistemologies. The interactions among these components lead to seven TPACK elements, defined as follows:

Content knowledge (CK): CK is based on Vergnaud's theory of conceptual fields (1990), which posits that representations and invariants are intertwined in forming a situational understanding of a concept. It pertains to the subjects that students have studied. Mishra and Koehler (2006, p. 1026) define CK as the "knowledge about actual subject matter that is to be learned or taught."

Technological knowledge (TK): Hofer and Grandgenett (2012, p. 85) describe TK as the "knowledge about standard technologies, such as books, chalk, blackboards, and more advanced technologies like the Internet and digital video," including interactive whiteboards and software programs (Baran, Chuang & Thompson, 2011). Schmidt et al. (2009) highlight the use of technology tools and resources.

Pedagogical knowledge (PK) refers to the instructional methods and their application. **Pedagogical Content Knowledge (PCK)** focuses on both the teaching process and an

understanding of the content to enhance teaching practices. According to Wilson et al. (2002), a strong foundation in PCK represents a form of professional knowledge essential for teaching the content of a specific subject area.

Technological Pedagogical Knowledge (TPK) refers to understanding how various technologies can enhance the teaching process and specific pedagogical practices. It includes knowledge of pedagogical strategies and how to effectively present and review a course using certain technologies (Margerum-Leys, 2002).

Technological Content Knowledge (TCK) involves understanding how to use technology to create new representations of content areas. In education, it includes the ability to determine which technology is suitable for presenting and learning a specific subject (Slough et al., n.d.).

Technological Pedagogical Content Knowledge (TPACK) encompasses the knowledge teachers require to successfully incorporate technology into their teaching across different subject areas (Baran, Chuang, & Thompson, 2011; Koehler & Mishra, 2009).

Koehler and Misha (2009) illustrate this in Figure 1 below.

Fig. 1

TPACK Model

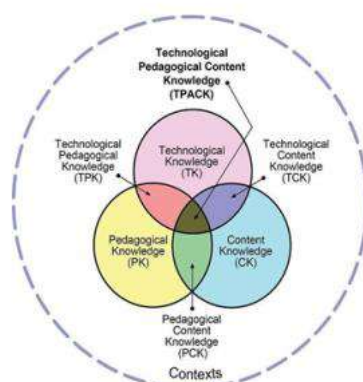


Figure 1. TPACK Model and its components (Koehler & Mishra, 2009)

Teaching General English

Jun Song (2014) mentioned that General English teaching (GET) emphasizes developing socio-linguistic communication skills and cultural awareness, aiming to equip students with the ability to use English for social and cultural interactions and extensive reading.

Empowering instructors

Empowering lecturers involves enhancing their autonomy, agency, and capacity for positive change in their teaching practices, primarily through professional development. This strategy, employed by educational institutions, ensures that teaching and administrative staff continually improve their skills and competencies throughout their careers (Mizell, 2010). It is well-established that professional development enhances university teaching (Cannon, 1983). As described by Lange (1990), teacher development is an ongoing process of intellectual,

experiential, and attitudinal growth, allowing teachers to evolve in their methods throughout their careers.

The most effective method in empowering instructors is via professional development activities. The National Council of Teachers of English (NCTE) outlines four key dimensions of effective professional development. It should involve collaborative learning, where educators engage in writing, respond to various genres, and share insights. It is also believed to promote inquiry into practice and encourage reflection and sharing of teaching methods. Additionally, professional development is expected to provide immersive reading and research opportunities, deepening educators' pedagogy interpretation. Finally, educators are supposed to take on leadership and advocacy roles. Thus, a community of leaders who inspire and guide others is formed.

TPACK and its application in assuring the quality of language education

TPACK (Technological Pedagogical Content Knowledge) provides a robust framework for integrating technology into teaching and learning (Tyarakanita et al., 2021; Ertmer, 2013; Greene, Jones, 2020). By merging technological, pedagogical, and content knowledge, TPACK empowers language lecturers to design and deliver engaging, effective, and relevant teaching practices (Ilgaz & Usluel, 2014; Sariçoban et al., 2017; He et al., 2021). It is expected that when aligned with quality assurance principles, TPACK can significantly enhance the overall quality of language education.

Previous research has explored the multifaceted nature of TPACK. Greene and Jones (2020) emphasized the contextual diversity of TPACK in teaching English as a Second Language. The study pointed out the need for a critical perspective on teacher development. Similarly, Lim et al. (2021) identified key trends in TPACK research, ranging from its measurement to relationships with other variables, development strategies, implementation challenges, and assessment tools.

In an effort to provide a broader context for quality assurance in language education, the Quality Assurance Guidelines and Criteria for Providers of English Language Teaching (QA Guidelines for ELT) constructed a standardized framework for evaluating teaching quality. Combining TPACK with these guidelines, educators are supposed to systematically enhance their practice and demonstrate alignment with language education standards.

Integrating TPACK in Continuous Professional Development (CPD) as a quality assurance approach

It is undisputable that CPD has emerged as a cornerstone for enhancing teacher competence and improving learning outcomes. Especially in the 4.0 technology era, the integration of Technological Pedagogical Content Knowledge (TPACK) within CPD programs has been increasingly recognized as a crucial strategy for quality assurance in teaching.

Researchers have agreed on the importance of TPACK in teacher development. Originally, Mishra and Koehler (2006) introduced the TPACK framework, which highlighted the intricate interplay between technology, pedagogy, and content knowledge. Subsequent studies have explored the implications of TPACK for teacher education and professional development. For

instance, Ertmer et al (2013) emphasized the possibility of TPACK-based CPD programs in fostering teachers' ability to effectively integrate technology into their classrooms.

CPD in language education quality assurance has also been proven to be significant. Fullan (2007), for example, emphasized the significance of ongoing professional learning in raising educational standards. Cuban (2001) argued that teachers require sustained support and development to effectively utilize technology for instructional purposes in the context of technology integration. Those studies pointed out that in order to maintain teaching quality, language lecturers have to participate in ongoing professional development activities.

Therefore, it is logical to expect that merging TPACK with CPD will benefit educators in terms of creating a synergistic approach to quality assurance. Akcayir and Demirbilek (2012) concluded that TPACK-focused CPD programs can significantly improve teachers' self-efficacy in using technology and their ability to design technology-rich learning environments. Furthermore, Wang and Tsai (2016) demonstrated that TPACK-integrated CPD can practically enhance teachers' pedagogical content knowledge and, ultimately, student achievement.

However, challenges remain in implementing TPACK-based CPD programs effectively. Cuban (2001) cautioned against the "technological imperative ."Instead, he suggested aligning technology integration with pedagogical goals. Mishra and Koehler (2006) also noted the complexity of developing TPACK. To master TPACK, lecturers must undergo self-practice and reflect on their technology use.

The best way to tackle these challenges is to construct CPD programs that provide teachers with both theoretical knowledge of TPACK and practical experience applying it to their classrooms. Ertmer et al. (2013) recommended a blended approach combining face-to-face workshops, online learning, and coaching support. Additionally, Akcayir and Demirbilek (2012) emphasized the importance of creating supportive school environments that encourage technology integration and teacher collaboration.

Integrating TPACK into in-service CPD can be a promising approach to enhancing teacher competence and quality assurance in language education. Schools should nurture a culture of innovation in language teaching and learning by providing teachers with the necessary knowledge, skills, and support.

Research Questions

Based on those landscapes, researchers conducted this study to explore dual issues of integrating TPACK to empower lecturers and assure the teaching quality of the General English program at the investigated HEI. To meet these study objectives, research questions were raised:

1. How do GE lecturers at the participating higher institution perceive their TPACK?
2. How do GE lecturers at the participating higher institution demonstrate their TPACK?

Methods

Pedagogical Setting & Participants

The study was conducted at a public university with a student body of up to 36,000. Among these students, 90% are enrolled in General English courses, which contribute to 6 of the 140 credits required for their degree programs. The participants in the study were all general English instructors (45 tenures and 16 visiting) from the Faculty of Foreign Languages, who had nine to twenty years of experience teaching this subject. These instructors are aged between 33 and 53. Those were officially trained in Technology in Teaching English in their Master's program. Then they were exposed to in-service ICT workshops, namely MsTeams, Zoom meetings, LMS, EduTech in Teaching English, ChatBOT, and AI in Language Education.

The General English program consists of two courses, each worth three credits. The curriculum is designed to develop A2-level proficiency in listening, reading, speaking, and writing skills, using the LIFE (Pre-intermediate) textbook. Students are evaluated through both summative and continuous assessments, which help prepare them for exams like TOEIC, TOEFL, IELTS, and VSTEP at the B1 level. Upon completing both courses, students have the option to take a preparation course aimed at achieving B1 proficiency, which is necessary for obtaining an English certificate required for graduation.

Design of the Study

Creswell's (2014) emphasis on using simultaneous mixed methods underscores the growing recognition that complex social and behavioral matters often require multiple approaches for a comprehensive understanding. Hence, this research employed a mixed-method approach to evaluate instructors' perceptions and demonstrations of their TPACK. The quantitative data was collected from a questionnaire, while a qualitative method was used concurrently to collect evidence of how instructors demonstrated their TPACK competence. The triangulation of data is the foundation for the researcher to identify gaps in the instructors' TPACK competence.

Data collection & analysis

The questionnaire was structured into three sections: (1) Demographics, (2) lecturers' perceptions of TPACK to address research question 1, and (3) lecturers' demonstration of TPACK in the form of a self-report, partially addressing research question 2. Sections 2 and 3 of the questionnaire were adapted from Schmidt et al. (2009). To further answer research question 2, additional qualitative data were collected through class observations and interviews, drawing on Harris (2010).

The quantitative data were analyzed using SPSS 26, employing descriptive statistics to summarize and describe the key features of the dataset. The qualitative data were analyzed using content analysis and thematic analysis.

Results/Findings

GE lecturers' perception of their TPACK

The following section presents and analyzes quantitative survey results to explore GE lecturers' perceptions of their TPACK competencies. Lecturers provided detailed self-assessments of their teaching knowledge, content knowledge, pedagogy knowledge, teaching content knowledge, teaching pedagogy knowledge, and technological knowledge.

The questionnaire was distributed to 61 online and offline instructors based on their preferences and convenience. Out of the 53 instructors who returned their surveys, 5 were incomplete and thus excluded from the data analysis, leaving a total of 48 complete responses.

Table 1.

Self-evaluation of teaching knowledge

Technological knowledge breakdowns	N	Mean	Std. Deviation
TK1 (I know how to solve my own technical problems)	48	3,68	,58
TK2 (I can learn technology easily)	48	3,68	,68
TK3 (I keep up with important new technologies)	48	3,43	,87
TK4 (I frequently play around the technology)	48	3,62	,60
TK5 (I know about a lot of different technologies)	48	3,37	,93
TK6 (I have the technical skills I need to use technology)	48	3,87	,48

The data presents a breakdown of technological knowledge (TK) related to technology use among 48 respondents, with each item measured on a scale. The items assess various aspects of technological competence, including problem-solving (TK1), ease of learning technology (TK2), staying updated with new technologies (TK3), engagement with technology (TK4), familiarity with different technologies (TK5), and possessing necessary technical skills (TK6). The mean scores ranging from 3.37 to 3.87 indicated a generally positive self-assessment across these areas. Standard deviations, ranging from 0.48 to 0.93, showed that responses were not uniform, with the greatest variation in TK5 and the least in TK6.

Table 2.

Self-evaluation of content knowledge

Content knowledge breakdowns	N	Mean	Std. Deviation
CK1 (I have sufficient knowledge of English)	48	3,93	,90
CK2 (I have various ways and strategies of developing my understanding of English)	48	4,00	,94

Table 2 illustrates two components of content knowledge (CK) related to English language proficiency among 48 respondents. CK1, 3.93, and CK2, 4.00 suggest that respondents generally feel confident in their knowledge and strategies for English knowledge. The standard deviations, 0.90 for CK1 and 0.94 for CK2 indicate moderate response variation.

Table 3.

Self-evaluation of Pedagogy knowledge

Pedagogy knowledge breakdowns	N	Mean	Std. Deviation
PK1 (I know how to assess student performance in a classroom)	48	4,00	,94
PK2(I can adapt my teaching based on what students currently understand or do not understand)	48	4,06	,97
PK3 (I can adapt my teaching style to different learners)	48	4,00	,94
PK4 (I can assess student learning in multiple ways)	48	4,00	,94
PK5 (I can use a wide range of teaching approaches in a classroom setting)	48	3,87	1,00
PK6 (I am familiar with common student understandings and misconceptions)	48	4,00	,94
PK7 (I know how to organize and maintain classroom management)	48	4,12	,93

The data outlines pedagogy knowledge (PK) among 48 respondents. The items cover various aspects of pedagogy, such as assessing student performance, adapting teaching based on student understanding, modifying teaching styles for different learners, using multiple assessment methods, employing diverse teaching approaches, understanding common student misconceptions, and managing classroom organization. The average mean scores of 4.0 indicate high confidence in participants' pedagogical skills.

Table 4.

Self-evaluation of Pedagogy Content Knowledge and Teaching Content Knowledge

Pedagogy Content Knowledge and Teaching Content Knowledge	N	Mean	Std. Deviation
PCK (I can select effective teaching approaches to guide student thinking and learning in English)	48	3,87	1,00
TCK (I know about technologies that I can use for understanding and doing English)	48	3,87	,93

The data provides insights into Pedagogical Content Knowledge (PCK) and Technological Content Knowledge (TCK) among 48 respondents, focusing on teaching and technology use in English instruction. The PCK measure reflects respondents' confidence in selecting effective teaching approaches to enhance student learning in English, with a mean score of 3.87 and a standard deviation of 1.00. The TCK measure assesses knowledge of technologies that can be used for teaching and understanding English, also with a mean score of 3.87 and a slightly lower standard deviation of 0.93. These scores suggest that respondents generally feel capable in both areas, with some variation in their self-assessed knowledge and skills.

Table 5.

Self-evaluation of Teaching Pedagogy Content Knowledge

Teaching Pedagogy Knowledge breakdowns	N	Mean	Std. Deviation
TPK1 (I can choose technologies that enhance the teaching approaches for a lesson)	48	3,75	1,15
TPK2(I can choose technologies that enhance students' learning for a lesson)	48	3,81	1,19
TPK3(I am thinking critically about how to use technology in my classroom)	48	3,75	1,04
TPK4(I can adapt the use of the technologies that I am learning about to different teaching activities)	48	3,62	1,17
TPK5(I can select technologies to use in my classroom that enhance what I teach, how I teach, and what students learn)	48	3,75	1,15
TPK6 (I can use strategies that combine content, technologies, and teaching approaches that I learned in my classroom)	48	3,68	1,16
TPK7 (I can provide leadership in helping others coordinate the use of content, technologies, and teaching approaches at my school)	48	3,25	1,10
TPK8 (I can choose technologies that enhance the content for a lesson)	48	3,75	1,15

The data outlines the Teaching Pedagogy Knowledge (TPK) of 48 respondents, focusing on their ability to integrate technology into teaching. The items measure various skills, including choosing technologies to enhance teaching methods (TPK1), enhancing student learning with technology (TPK2), critical thinking about technology use (TPK3), adapting technologies for different teaching activities (TPK4), selecting technologies that complement content and pedagogy (TPK5), combining content, technology, and teaching strategies (TPK6), providing leadership in technology integration (TPK7), and enhancing lesson content with technology (TPK8).

The mean scores range from 3.25 to 3.81, indicating a moderate to high level of confidence in these areas. The standard deviations, ranging from 1.04 to 1.19, suggest considerable variability in respondents' perceived abilities, with the highest variability observed in TPK2 and TPK4. This variability indicates differing levels of confidence in using technology to enhance student learning and adapting technology to various teaching activities.

Table 6.

Content knowledge breakdowns

Content knowledge breakdowns	N	Mean	Std. Deviation
TPACK (I can teach lessons that appropriately combine English, technologies, and teaching approaches)	48	3,68	1,05

Table 4.6 depicts the self-assessed TPACK, which measures respondents' ability to integrate English content, technology, and teaching approaches in their lessons. The mean score of 3.68 suggests that respondents were generally confident in their overall competence.

The quantitative data provides a general overview of how lecturers perceived their TPACK competence. They generally expressed confidence in their technological abilities, English language proficiency, and pedagogical expertise. While mean scores indicate overall positive self-assessment, individual responses varied. It can be interpreted as differing levels of comfort with specific skills, such as technology integration and pedagogical content knowledge.

GE lecturers' demonstration of their TPACK

The data from the questionnaire indicates that lecturers participated in a series of training sessions focused on modern educational technologies designed to enhance teaching and learning experiences. Two-thirds of the participants reported participation in the technology workshop. They reported having attended workshops such as an E-learning Course on Machine Learning, workshops on AI in Language Teaching, innovative teaching methodologies such as STEM education, and interactive tools like Classkick, Quizizz, and the Flipped Classroom model.

The data collected from interviews and class observations showed that only about 9/48 lecturers authentically integrated technology into their instruction. These ten lecturers were coded as T1, T2, T3, T4, T5, T6, T7, T8, and T9. Various ways teachers incorporate the TPACK framework into their teaching practices were recorded as follows. First, teachers are found to integrate technology to enhance content delivery and engage students through diverse pedagogical approaches. For instance, in writing classes, T1, T5, T7, T8, and T9 used Grammarly, ChatGPT, and Gemini to aid students in refining their grammar and spelling while drafting short stories. In an interactive and collaborative learning mode, T2, T4, T6, and T9 employ Quizzes and Classkick apps to reinforce vocabulary, language structures, reading, and listening skills. Additionally, T1, T3, T6, T7, and T9 utilize tools like Canva for student presentations and Google Docs for writing tasks, through which creativity and teamwork in task-based assignments were promoted. In conversation classes T4, T5, T7, T8, and T9, students were guided to practice dialogue in pairs, record their interactions, and submit them via MS Teams for feedback. For pre-reading activities, T5, T7, T8, and T9 used digital quizzes and Kahoot to make students build vocabulary in an entertaining mode. T1, 3, and 5 used Padlet and "Write & Improve" to foster project-based learning. Students could write and receive constructive feedback on past event narratives in this mode. All participants reported on using available YouTube videos as supplementary sources for their lessons. In brief, the interview and observation resulted in participants' diverse use of technology, demonstrating a commitment to

engaging students and enhancing learning outcomes. Owing to integrate various digital tools, teachers motivate students and equip them with essential skills for the digital age.

Discussion

The quantitative data revealed that participants were generally confident in their overall TPACK competence. However, the high standard deviation indicated significant variation among them. The finding further supported this trend that only a small percentage of lecturers had participated in ICT professional development activities, despite achieving C1-level proficiency in exams like VSTEP or IELTS to meet the Ministry of Education and Training (MOET) requirements for tertiary lecturers.

As can be seen from the qualitative data collected in section three of the questionnaire, the fact that only five out of forty-eight lecturers described their TPACK in the classroom suggests that lecturers rarely integrate technology effectively into their classrooms. This finding aligns with Arnold and Ducate's (2015) assertion that language teachers still struggle to fully leverage technology's pedagogical benefits. Susanto and Yosephine (2019) attribute this lack of usage to the perceived excessive time and effort required, which may deter teachers from realizing technology's full potential. One potential solution is to facilitate internal sharing workshops among General English lecturers to exchange TPACK competencies. This approach echoes Ding et al.'s (2019) suggestion that supporting teachers is crucial for them to recognize how technology can enhance their classrooms. More seriously, in the AI-prone era, the limited pedagogical design of the AI apps or the teachers' insufficient pedagogical understanding may be the root of the problems with the implementation of AI in the classroom, according to Rieland (2017) and Zawacki-Richter (2019). Vo and Le (2023) also discovered challenges lecturers face in online teaching, including finding effective strategies to motivate and interact with learners, insufficient training in designing lesson content that incorporates technological tools, and technical issues that affect the teaching and learning process. Lecturers who lack updated knowledge of AI tools risk falling behind their students and may struggle to detect cheating effectively. However, AI tools do not need to be highly sophisticated; they can include everyday applications that many already use. For example, Nguyen and Pham (2022) found that tools such as PowerPoint, YouTube, speech recognition software, and films can significantly enhance the oral communication skills of EFL learners.

Lecturers who claimed to have taken Edtech courses showed higher confidence in applying technologies when teaching GE. This result aligns with Kao *et al.* (2020) claiming that prior experience with the internet can boost teachers' confidence in their ability to participate in web-based professional development programs focused on technology integration in the classroom. This, in turn, can lead to more positive views among teachers about the role of technology in education. Moreover, technology also facilitates lecturers' testing preparation. Le (2024) suggested offering more training sessions to guide lecturers on using the chatbot for test design. Additionally, encouraging lecturers to actively participate in a knowledge-sharing community can help maximize the effectiveness of ChatGPT's features in this area.

Letting teachers evaluate their own TPACK competence is a good start to designing a CDP

program. This idea can be firmly based on Mark and Swapna (2014), who developed an educational technology course for preservice social studies teachers based on the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006).

Implications

The findings from quantitative data formed the foundation for implementing lecturers' CPD, particularly in the context of integrating technology into teaching. First, the significant variation in TPACK competence among lecturers, coupled with the low participation in ICT professional development activities, indicates a pressing need for more targeted and accessible training programs. Tailored programs should not only focus on enhancing technological skills but also emphasize the pedagogical integration of technology, as many lecturers struggle to effectively use these tools in their classrooms.

The qualitative data shows that only a small fraction of lecturers are actively integrating TPACK in their teaching, which aligns with broader challenges identified in the literature regarding the effective use of technology in education. It is recommended that institutions conduct internal workshops for lecturers to exchange their experiences and strategies for using technology in the classroom, learn from one another, and collectively improve their TPACK competence.

In addition, educators in the AI era must be equipped to use edTech tools and understand their pedagogical implications. Lecturers' limited use of AI tools detrimentally disadvantages them compared to their students. Self-assessment of their TPACK competence could be a valuable starting point for conducting tailored internal CPD workshops for lecturers.

Conclusion

TPACK has been widely recognized by language educators globally. However, many institutions have not yet found ways to integrate it effectively, especially in public institutions, where lecturers were in a secure tenure status and unwilling to embrace new technology after their official training. Consequently, their early-equipped TPACK was deemed to fade away in a secure teaching environment, resulting in low-quality teaching and learning outcomes.

All educators are required to attain the Certificate of Basic Computer Science. While the majority are adept at utilizing AI tools for educational purposes, they encounter challenges in integrating these tools into their instructional practices. Therefore, there is a pressing need for additional workshops focused on AI tools and their application within the academic context. Furthermore, the adoption of electronic lectures should be promoted to afford students the opportunity to revisit and expand upon lesson content. Institutions launched the electronic lecture project at the outset of the new semester in 2024. However, it is currently in its nascent stage and is subject to limitations in certain disciplines due to a scarcity of video recording equipment. There is an imperative need for precise guidance and comprehensive support in terms of facilities to ensure the production of high-caliber video content for future utilization. All educators must undergo a competency assessment test such as IELTS or VSTEP to attain the standard level of teaching.

Furthermore, they should be well-versed in the latest educational trends and methodologies.

Convening conferences within university faculties, across city-based universities, and even on a national or international scale is essential for addressing in-class issues and exchanging teaching methods. While renowned organizations like Macmillan, Oxford, and Cambridge have been organizing such events for an extensive period, Vietnam requires further development of these workshops due to the different study contexts and educational backgrounds.

Thus, recommendations involved encouraging peer observation to share TPACK knowledge, offering internal workshops to refresh TPACK skills, participating in external workshops on AI in TESOL, and attending various TESOL conferences to improve teaching skills. Moreover, incorporating TPACK competencies into teacher evaluations, particularly observation strategies, is recommended to recognize and incentivize effective teaching practices. These approaches promise to enhance the quality of general English teaching in the digital era.

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Exploring Vocational Students' Perceptions Towards Language Hub in Enhancing Autonomy

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ABSTRACT

This study aims to examine how an integrated digital learning platform, the Language Hub system, may enable vocational students to acquire more language learning autonomy. Although great efforts are made to raise language competency, vocational students typically need help to become autonomous in their educational process. This study fills in this gap by examining students' perceptions of the Language Hub and how it influences learner autonomy. Learner autonomy is proven to improve language acquisition significantly. The study was conducted with 80 students from a vocational school and employed qualitative data collected through a single-source student questionnaire. The findings significantly improved understanding of the effectiveness of online learning platforms in increasing learner autonomy in language education settings. The results show that the Language Hub program has greatly improved students' autonomy and language abilities. The long-term effects and adaptability of combined digital learning systems in different educational settings should be the main focus of the next studies. This paper emphasizes the need for such platforms to support autonomy and fulfill the changing language education.

Keywords: AI, Language Hub system, vocational students, students' perspective

Introduction

When artificial intelligence (AI) is used to teach a foreign language, it changes the way people learn, especially professional students. The Language Hub, an AI-powered platform, is at the forefront of this change. It encourages students to manage their own learning and participate.

By providing immediate feedback and encouraging autonomous learning practices, artificial intelligence systems improve learner autonomy (Wang & Zhang, 2022). Holec (1979) emphasizes the requirement of self-reflection and self-assessment as learner autonomy is, according to him, significant in education. The Language Hub provides tailored solutions that enable non-English major vocational students to take charge of their learning path, therefore addressing their needs (Kukulska-Hulme, 2020).

AI also increases student inspiration and involvement. As Yang et al. (2020) underline, interactive technologies not only make language learning more fun and accessible but also aid in lowering anxiety, thus boosting student confidence. By addressing individual strengths and shortcomings, the Language Hub's AI capabilities provide tailored comments that motivate students to assume more accountability for their education.

In conclusion, for vocational students, including artificial intelligence in language education via systems like the Language Hub offers major advantages. These artificial intelligence applications improve language skills and self-confidence by encouraging autonomy and active participation, hence improving academic and employment results. However, further study is required to fully grasp how artificial intelligence might affect student autonomy and the general success of language instruction.

Literature review

Artificial Intelligence (AI) in Foreign Language Education

Artificial intelligence (AI) is becoming important in modern education because it provides flexible and tailored learning opportunities that support student autonomy. An AI-driven tool called The Language Hub generates interactive language learning environments, allowing vocational students to participate in autonomous learning. Many studies have looked at how artificial intelligence may improve language learning autonomously, especially for vocational students. For example, Liu et al. (2022) looked at how well students engaged and developed their language skills by combining AI-powered language learning systems. In a similar vein, Wang and Zhang (2021) investigated the effects of AI-enhanced grammar checkers and concluded that students gained from the error-correcting features.

Utilization of AI-power tools in students' autonomy

The Greek word "autonomos," where "auto" means self and "nomos" means law, is the source of the word "autonomy." The idea originally surfaced in the framework of foreign language education and instruction in 1979, when Holec described autonomy as "the ability to take charge of one's learning" (Benson, 2011, p. 58). Several definitions of learner autonomy have evolved from Holec's point of view, all emphasizing the need for learners to have the freedom to make their own choices and judgments in their efforts to learn (Benson, 2012).

Boosting student autonomy during the learning language process benefits much from using technology driven by artificial intelligence. Research shows these tools can help students boost their confidence and hone their skills (Haleem, Javaid & Singh, 2022). Improvements in natural language processing allow artificial intelligence apps to provide useful remarks, topic analysis, and encouraging cues for students who first find a second language challenging.

The Language Hub system is an innovative solution.

Research indicates that by giving students personalized training and support, AI-powered systems have enormous potential to improve language instruction (Haleem, Javaid & Singh, 2022). Leading educational technology company Vietec Corp claims that the Language Hub system offers universities and colleges thorough support and performs better than world standards for English language instruction. Based on Macmillan Education's "American Language Hub" curriculum, the system is meant to fit the requirements of all educational stakeholders—that is, parents, instructors, administrators, and students. Its mix of artificial intelligence and mobile apps provides strong instruments for evaluating student performance and adjusting learning opportunities to fit particular student needs.

Although the Language Hub system marks significant developments in educational technology, more studies are required to grasp its influence and enhance its use in employment environments. Investigating its effectiveness and looking at best practices can help teachers completely grasp the possibilities of AI-driven language instruction to raise student outcomes (Lunning, 2023).

Research Questions

To fulfill the study's purpose, the survey sought to answer the following research questions:

What are vocational students' perceptions and attitudes toward using Language Hub to enhance their autonomy in language learning?

Methods

Pedagogical Setting & Participants

The study was conducted at a vocational school in Hanoi, where students are enrolled in diverse technical and professional training programs in information technology, software development, and hospitality management. The research was conducted during an academic block (equaling 6 weeks) at FPT Polytechnic College, where the English language education program applies a blended learning approach. All students enrolled at FPT Polytechnic must complete an English course that integrates both offline and online learning elements. Among the four levels of English subjects offered at the college, including English 1.1, English 1.2, English 2.1, and English 2.2, provide students enrolled in this level with an account to access the Language Hub website, learning app, and activities as part of their coursework. Each level contains 17 comprehensive lessons delivered through materials and digital resources. Previously, all levels used to learn the Top Notch 1 and Top Notch 2 textbooks, but starting from the spring semester of 2024, the curriculum has shifted to the American Language Hub program by Macmillan Education, one of the top five global publishers.

The study included 80 students currently enrolled at Level 1.1 across two separate classrooms, each taught by a qualified and dynamic teacher. Given the college's linguistic educational setting, learners were familiar with learning online at home and using computers as digital tools in in-person instruction. This group of students presented different points of view on how the Language Hub system should be affected in their English classes.

Design of the Study

In this study, a quantitative research approach was employed to gather data on vocational students' perceptions regarding the Language Hub and its role in enhancing their autonomy in language learning. Data were collected through an online survey questionnaire administered via Google Forms. The survey was distributed to 80 vocational students at FPT Hanoi Polytechnic, covering two classes, each taught by experienced educators.

The questionnaire was adapted from Soledispa (2023), who examined the impact of AI on language courses in higher education from the perspective of English instructors. It was divided into two sections. The first section focused on exploring their perceptions of AI and the Language Hub system, while the second section aimed to explore their perceptions of how the Language Hub system supports their autonomy and the challenges they face in using it for language learning. The survey was revised to better correspond with the study's unique aims and setting.

Quantitative analysis of the survey results revealed trends, patterns, or relationships with students' opinions on how well the Language Hub supports their autonomy in learning English. The survey findings influenced the whole of the Language Hub's influence on increasing students' autonomy in language acquisition.

Data collection and analysis

In this study, a quantitative research approach was employed to gather data on vocational students' perceptions regarding the Language Hub and its role in enhancing their autonomy in language learning. Students enrolled in several technical and professional training courses, including computer technology, software development, and hotel management, are housed in a vocational school in Hanoi city.

Data was collected using an online survey created by Google Forms. The survey was distributed to eighty vocational students across two classes at FPT Hanoi, each led by experienced instructors. The questionnaire was adapted from Soledispa (2023), who examined the perceptions of English teachers regarding the impact of artificial intelligence on language courses in higher education. It was divided into two sections: the first focused on assessing students' opinions about artificial intelligence and the Language Hub system, while the second explored how the Language Hub supports their autonomy and the challenges they encounter when using it for language learning. A quantitative analysis of the survey responses identified trends, patterns, and correlations concerning students' views on the effectiveness of the Language Hub in enhancing their autonomy in acquiring English. The findings were instrumental in assessing the overall impact of the Language Hub on fostering students' independence in language acquisition and in formulating recommendations for future development or implementation.

This study acquired quantitative data using pre- and post-intervention questionnaires, developed with a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The researchers sent these surveys to eighty FPT Hanoi Polytechnic vocational students across two classes taught by enthusiastic teachers.

The pre-intervention questionnaire was used to collect students' perceptions of AI and the Language Hub system. The post-intervention survey was given to evaluate any changes in these attitudes and experiences following the integration of the Language Hub into English language courses. After the Language Hub was put in place, the post-intervention survey sought to assess changes in students' learner autonomy. Statistical techniques were applied in data analysis to assess students' opinions about the Language Hub and how it affected their autonomy. These data and explanations enable us to investigate how the Language Hub could raise students' awareness. Adapted from Soledispa (2023), who investigated English instructors' opinions on how artificial intelligence affects language courses in a vocational environment, the questionnaire was divided into two parts. This study is to investigate, using a quantitative research approach and gathering data from the involved students, how effectively the Language Hub aids in student learning on their own in a vocational college in Hanoi.

Results/Findings and Discussion

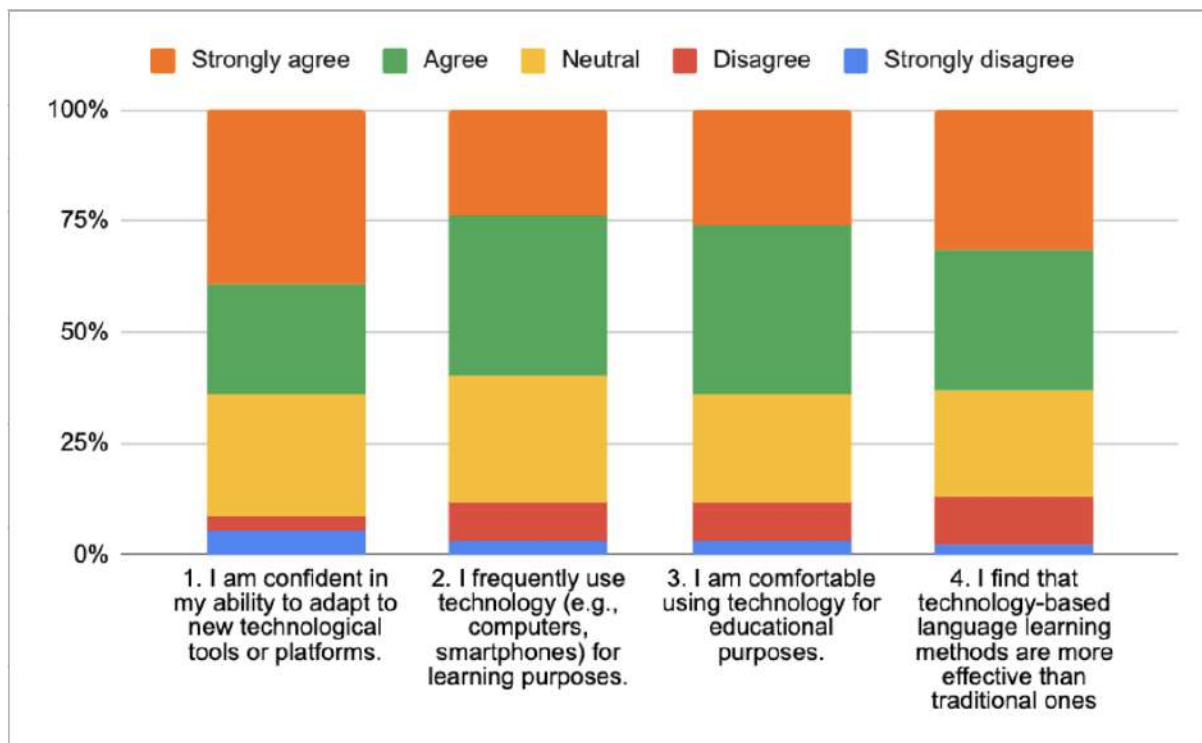
Students' Familiarity with Technology before the intervention

Students' initial experience of using The Language Hub System's artificial intelligence in English lessons.

The pre-intervention survey findings offer a complex picture of students' level of technological knowledge for foreign language learning.

Figure 1.

Students' familiarity with technology before the intervention



The survey results indicate that students generally have a positive perception of their familiarity with technology for educational purposes. Specifically, 39.1% of respondents strongly agreed that they are confident in adapting to new tools, while 25% agreed, reflecting a solid base of technological confidence. Additionally, 35.9% reported regularly using technology like computers and cell phones for learning, and 38% felt comfortable using technology for instructional purposes. However, some neutral responses highlight that some students remain uncertain about technology, suggesting a need for targeted support to enhance digital literacy.

Before the integration of the Language Hub, students showed moderate confidence in technology but hesitated to use AI tools. After the intervention, familiarity, and comfort with digital learning increased significantly, with over 80% feeling more accountable for their studies. Many students reported improved time management and motivation for self-directed study, with approximately 44% feeling better equipped to set personal learning goals, indicating enhanced autonomy.

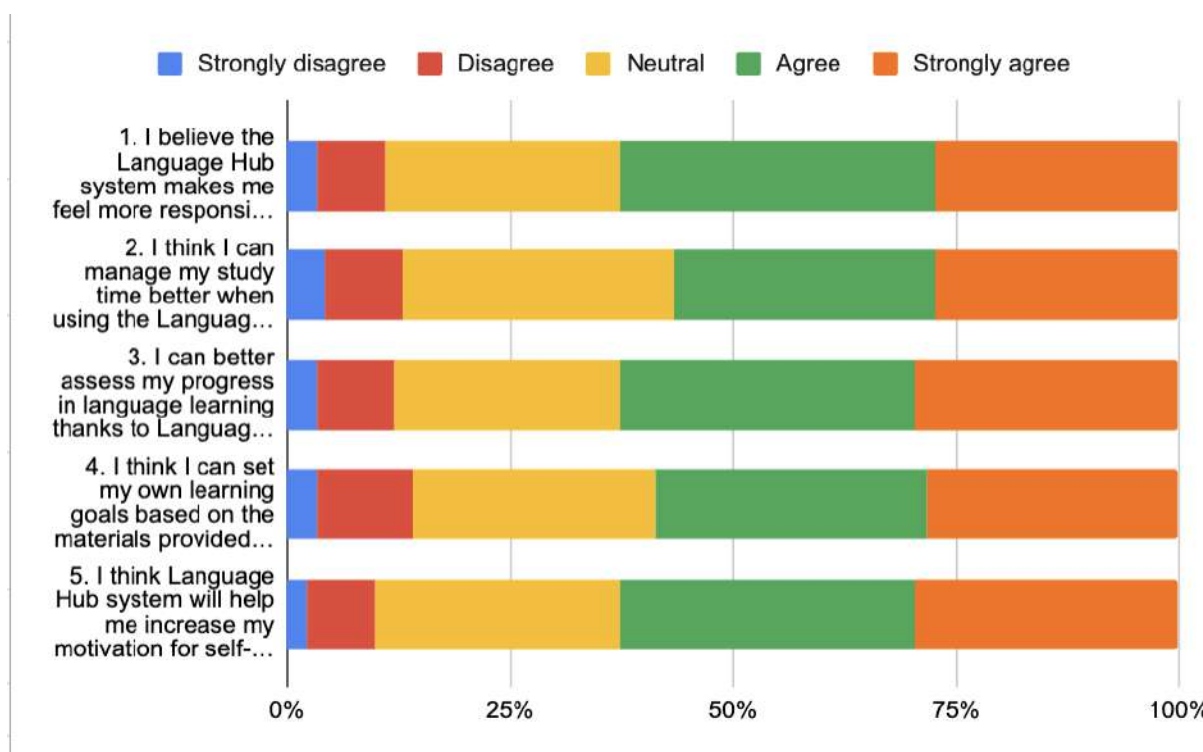
These findings align with previous research that suggests AI tools can foster learner autonomy. The personalized support from the Language Hub appears to enhance student engagement and motivation, corroborating earlier studies (e.g., Wang & Zhang, 2021) that identified similar

benefits of AI in education. Nevertheless, the initial resistance observed underscores the importance of providing supportive onboarding to address digital literacy gaps. Overall, this study reinforces the notion that AI tools can effectively promote independent learning in vocational contexts, especially when introduced with adequate guidance.

Perceptions of the Language Hub in Enhancing Autonomy

Figure 2.

Students' perceptions towards the effectiveness of the Language Hub in enhancing their autonomy in language learning before the intervention



The results indicate that students perceive the Language Hub system as a significant tool for enhancing autonomy in language learning. Specifically, 35.2% of participants agreed and 27.4% strongly agreed that the system helps them feel more responsible for their studies. Regarding time management, 29.3% believed they could manage their time more effectively, while 27.3% strongly agreed. In terms of self-assessing their progress, 33.0% agreed that the system improves this capability, along with 29.6% who strongly agreed. Furthermore, 30.4% reported being able to set learning goals based on the materials provided by the Language Hub, and 33.0% believed it would enhance their motivation for self-study.

These findings align with previous research on the positive impact of digital learning platforms on learner autonomy and responsibility (Wang & Zhang, 2021). Although many students recognize the potential benefits of the Language Hub, the presence of neutral responses suggests that some learners remain uncertain about its effectiveness or may require additional support.

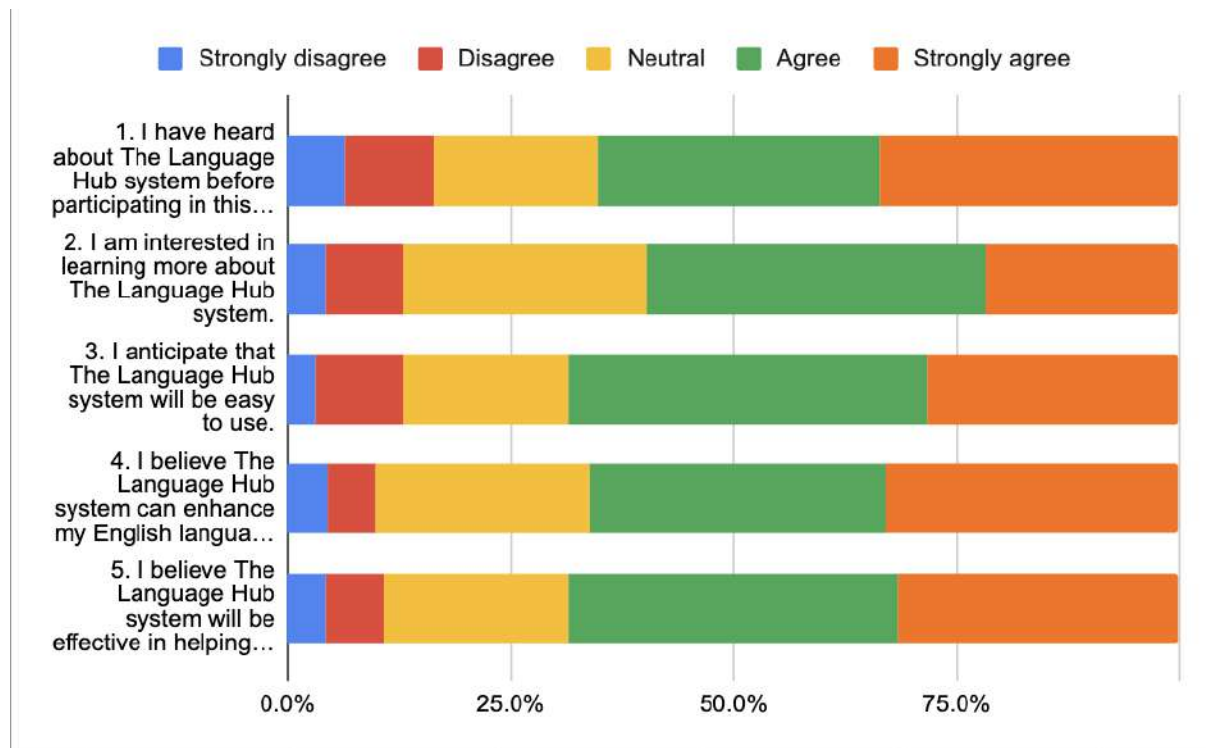
This implies that the Language Hub fosters student responsibility and enhances their ability to manage their autonomous learning processes. Educators must address the neutral feedback by providing targeted training and support to help students maximize the system's benefits. Overall, the results suggest that AI technology in vocational education holds significant potential to create a more engaging and self-directed learning experience, contributing to improved language proficiency and learner autonomy.

Perceptions Toward the Language Hub System

Before the intervention, students' awareness of and interest in the Language Hub system was relatively high. For instance, 33.7% strongly agreed that they had heard about the system before the survey, and 38% were interested in learning more. However, a significant number of students were neutral or disagreed, indicating a lack of familiarity or engagement with the system at this point.

Figure 3.

Students’ perceptions towards The Language Hub System before the intervention



The survey results show that students generally perceive the Language Hub system positively. Specifically, 35.2% agreed and 27.4% strongly agreed that the system enhances their responsibility for their studies. Additionally, 29.3% felt they could manage their study time better, with 27.3% strongly agreeing. Regarding self-assessment of progress, 33.0% indicated improved evaluation skills, while 29.6% strongly agreed. Furthermore, 30.4% believed they could set learning goals based on the materials, and 33.0% felt the system would increase their motivation for self-directed learning.

These findings align with Wang and Zhang (2021), which highlighted the positive impact of digital learning platforms on learner autonomy and responsibility. The results suggest that the Language Hub fosters accountability and enhances independent learning management. However, neutral responses indicate that some students may be uncertain about the system's effectiveness or require additional support.

31.5% reported prior knowledge of the Language Hub, with 33.7% expressing strong agreement. A notable 40.2% anticipated ease of use, contributing to a favorable learning experience. Moreover, 66% believed the system could provide a personalized learning environment, reinforcing its potential to enhance English language learning.

These findings underscore the transformative role of AI and digital tools in vocational

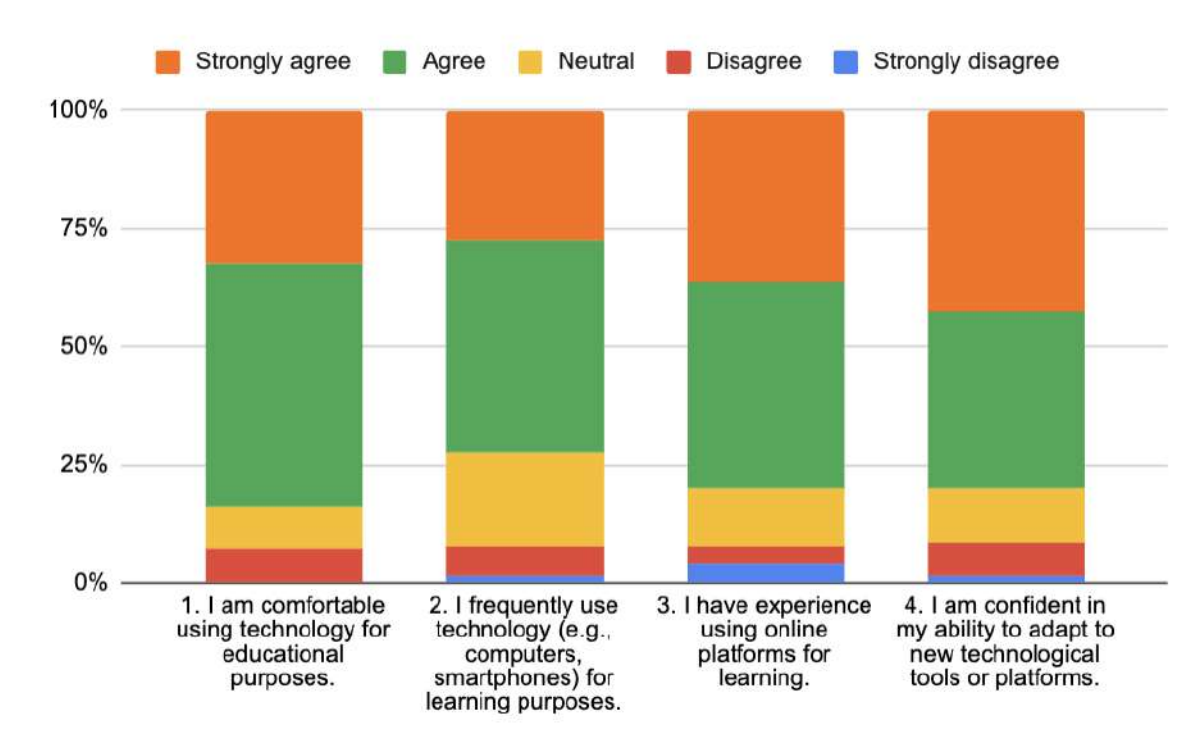
education, particularly in promoting learner autonomy and motivation. Addressing neutral feedback through targeted training and support is essential to maximizing the system's impact, ultimately leading to improved language proficiency and learner autonomy

Students' perceptions towards AI application in English classes via The Language Hub System after the intervention.

The post-intervention survey provides intriguing insights into students' familiarity with technology after the intervention period.

Figure 4.

Students' familiarity with technology after the intervention

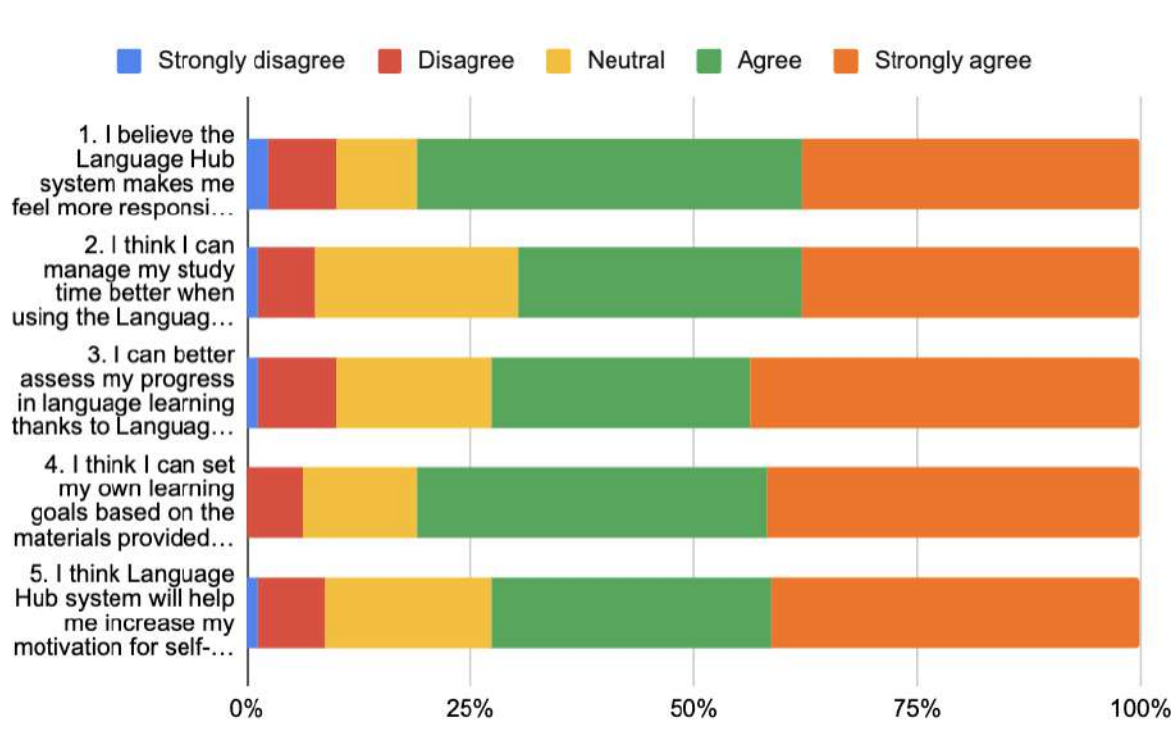


The survey results indicate that students are comfortable and familiar with technology in educational contexts. Specifically, 51.2% of participants agreed, and 32.5% strongly agreed that they are comfortable using technology for educational purposes. Additionally, 45% reported frequently using devices such as computers and smartphones for learning, while 27.4% strongly agreed with this statement. Furthermore, 43.8% indicated agreement regarding their experience with online learning platforms, complemented by 36.3% who strongly agreed. Notably, 37.5% of respondents felt confident in their ability to adapt to new technological tools, with 42.4% strongly agreeing.

These findings align with existing literature, underscoring the positive impact of technology integration in education on student engagement and learning outcomes (Kuo et al., 2019). The high percentages of agreement reflect an increasing trend among students towards embracing technology as a critical component of their learning process. However, neutral responses suggest that a segment of students may require further support or training to fully leverage technological tools effectively. This highlights the importance of ongoing professional development for educators to enhance students' familiarity and confidence with technology, ultimately improving their learning experiences.

Figure 5.

Students' perceptions of the effectiveness of the Language Hub in enhancing their autonomy in language learning after the intervention



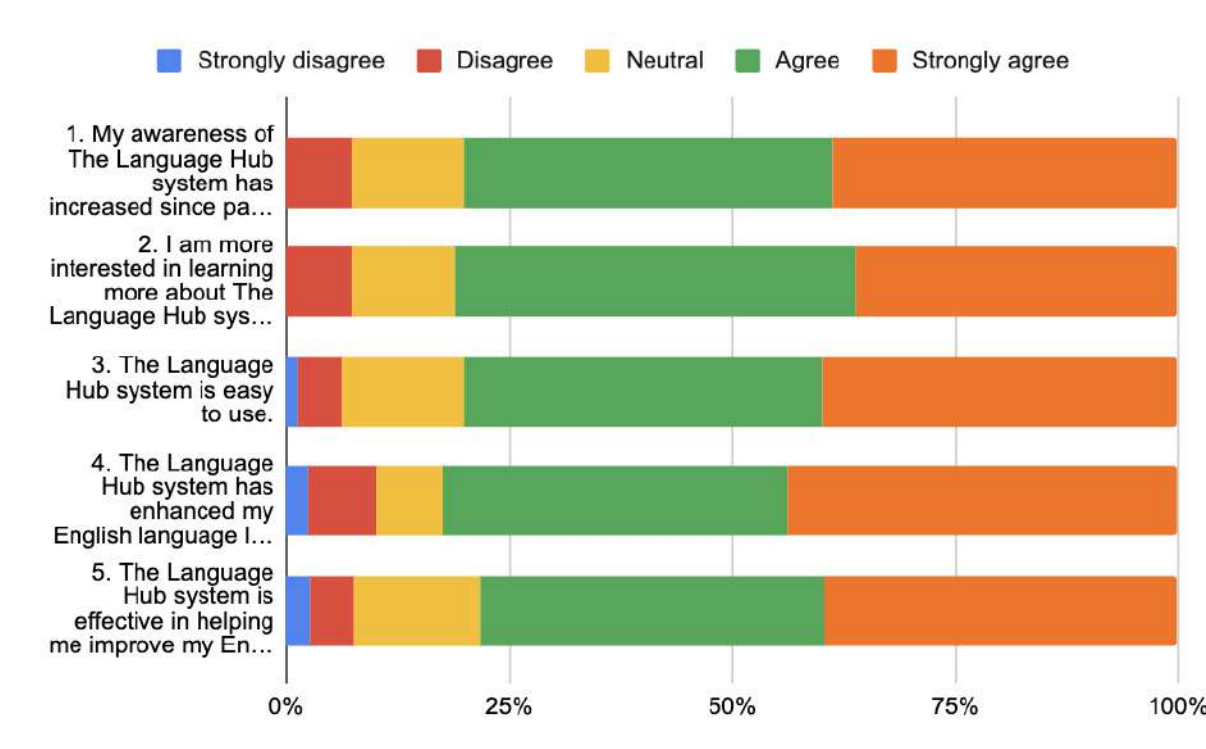
The survey results indicate that a significant majority of students view the Language Hub system as beneficial for enhancing their responsibility and autonomy in their studies. Specifically, 43% agreed and 38% strongly agreed that the system increases their sense of responsibility. Additionally, 38% strongly believe it helps them manage their study time effectively, with 31.6% also agreeing.

Moreover, 43.8% of respondents feel they can better assess their language learning progress due to the Language Hub, 41.7% believe they can set their own learning goals based on the provided materials, and 41.3% feel that the system boosts their motivation for self-study.

These findings align with research by Haleem, Javaid, and Singh (2022), which underscores the role of educational technology in fostering learner autonomy. The positive feedback on responsibility and goal-setting supports Wang and Zhang's (2021) assertion that digital platforms empower students. However, the presence of neutral responses suggests some students may need additional support to maximize the Language Hub's benefits, highlighting its potential to enhance language learning experiences and promote greater learner autonomy.

Figure 6.

Students’ perceptions towards The Language Hub System after the intervention



The survey results reveal that students have a favorable perception of the Language Hub system after the intervention. Notably, 41.2% of respondents agreed and 38.8% strongly agreed that their awareness of the Language Hub system has increased. Additionally, 45% expressed a heightened interest in learning more about the system, with 36.2% strongly agreeing. A significant 40% found the system easy to use, further supported by another 40% who strongly agreed. Regarding the learning experience, 38.8% of students agreed that the Language Hub has enhanced their English language learning through personalized environments, and 39.7% believed it effectively aids in improving their overall language proficiency, including listening, speaking, reading, writing, vocabulary, and grammar.

These findings align with previous research emphasizing the benefits of digital learning platforms in fostering student engagement and promoting personalized learning experiences (Haleem, Javaid, & Singh, 2022). The positive feedback regarding ease of use and effectiveness in enhancing language proficiency mirrors earlier studies highlighting how accessible technology can facilitate language learning. However, neutral responses suggest that some students may still be navigating their perceptions of the system, indicating a need for continuous support and guidance to maximize its potential. The results underscore the Language Hub's promise to enrich language learning experiences and enhance student autonomy.

Conclusion

According to the findings, the Language Hub system helps vocational students improve their English skills. Students demonstrated considerable improvement in language abilities such as listening, speaking, reading, and writing. They also displayed enhanced confidence and drive for studying as a result of the usage of technology and the system's extensive online resources.

However, the study does have certain drawbacks. For starters, the sample size is tiny and concentrates on a small number of students from a single university, affecting the data's representativeness. Second, the research needs long-term evaluations of the Language Hub system's impacts, making it difficult to claim its long-term effectiveness. Finally, the lack of in-depth investigation of individual aspects, such as learning motivation and learning styles, lowers the study's comprehensiveness.

To address these limitations, future research should increase the sample size and diversify the participating institutions to improve the representativeness of the findings. Furthermore, conducting long-term reviews will provide insight into the system's long-term effectiveness. Finally, studies should carefully analyze individual aspects that may influence the learning process to generate appropriate measures to improve students' learning outcomes.

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Biodata

Ms. Ho Khanh Huyen is an English lecturer at FPT Polytechnic College in Hanoi, Vietnam. She is passionate about integrating technology into teaching and classroom management, with a specific research focus on AI in language education, particularly English. Her primary goal is to support non-English-majored students in enhancing their English proficiency and fostering learning autonomy.

Ms. Hoang Thi Hoai is an English teacher at FPT Polytechnic College, Vietnam and IIG Academy Vietnam. Prior to this, she conducted research on the effectiveness of teaching non-English majors reading and speaking abilities through the use of strategies like Jigsaw and Story Telling. Moreover, her scholarly interests are deeply rooted in the integration of technology in language education, aiming to leverage digital tools to facilitate and enrich the learning experience.

Students' Perceptions of the Effect of Blended Learning on their Learning Autonomy

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ABSTRACT

Keywords: Blended learning, Learning autonomy, Perceptions, Vietnamese students.

Learning autonomy is a critical skill that significantly impacts students' success or failure in the classroom and their pursuit of lifelong learning. Today, learning autonomy is simpler than ever due to the rapid advancement of information technology. From these perspectives, this study investigates students' perceptions of the effect of blended learning (combining traditional teaching and online teaching) on their learning autonomy. With the participation of 120 students, the study combined both quantitative and qualitative methods through questionnaires and interviews. The results show that blended learning had the largest impact on learners' motivation, self-assessment, and acquiring teachers' requirements. Besides, the research also revealed some elements of blended learning that have not really enhanced learner autonomy, such as establishing study goals and implementing a learning strategy. I hope this study can provide teachers with an overview of the blended learning model and offer some suggestions to improve the effectiveness of this model when applied to teaching in Vietnam universities.

Introduction

The capacity for autonomous learning is a crucial skill that significantly impacts students' success or failure in the classroom and throughout their learning endeavors. Learner autonomy is considered an essential theme in teaching (Smith et al., 2017). According to Holec (1981), learner autonomy is a term that refers to the ability of learners to take responsibility for their own learning by being able to make and be responsible for decisions. These decisions involve determining learning goals, determining content and progress, choosing learning methods and techniques, and monitoring learning processes/procedures. Regarding this term, Victori and Lockhart (1995) assert that autonomous learning plays an

important role in learning and enables learners to achieve better results by making the learning process more personal and focused.

The rapid advancement of information technology has made autonomous learning more accessible than before. By the end of 2020, blended learning was applied in the classroom at numerous Vietnamese universities in an effort to stop the COVID-19 pandemic from spreading. Blended learning is offered as a combination of traditional teaching and E-learning (Pham, 2021), and it combines the best features of the two previously described teaching approaches. Numerous studies on blended learning approaches are being conducted worldwide, including those by Powell et al. (2015), Ribbe and Bezanilla (2013), and Bath and Bourke (2010). These studies have validated the efficacy of the blended learning approach by applying it to all educational levels, from primary school to university.

This approach was created based on the use of digital learning environments in the classroom to support students in developing self-study awareness and being proactive in selecting their study locations and times. Furthermore, it mitigates some of the drawbacks of the conventional model of teaching and learning, which requires instructors and students to meet in person at a specified time and place. Currently, applying the Blended-learning model in university teaching is a reasonable choice. Apart from endorsing the benefits of youth involvement in education, the approach also supports educators' adaptability and versatility. more varied instructional strategies to draw students' attention (Pham, 2021).

It is evident that the blended learning approach necessitates greater learning autonomy from students or more initiative and responsibility in their education. However, many Vietnamese researchers have not addressed the open topic of whether blended learning may improve student autonomy. Given that blended learning is beginning to saturate EFL classrooms and integrating technology takes into account students' perceptions, this study was conducted to investigate how students at Vietnam National University (VNU) perceive the effects of blended learning on their learning autonomy in English classes.

Literature review

Learner Autonomy in Blended Learning Environment

Many studies investigated learner autonomy from the viewpoints and attitudes of teachers in relation to research on language learner autonomy in traditional learning (Nguyen et al., 2024; Tran & Vu, 2024; Benson, 2016). Another trend in recent studies by Dixon et al. (2011) and Nguyen and Habók (2021) is the development of tools to quantify learner autonomy. Besides, studies on learner autonomy in blended learning indicate certain topical overlaps with learner autonomy in in-person instruction. Specifically, researchers tend to conduct research aimed at investigating learners' attitudes toward language learner autonomy (Tran & Duong, 2021; Adianingrum, 2017) or investigate learner autonomy from learner beliefs and learner perceptions (Do et al., 2024; Surabaya, 2021; Serdyukova & Serdyukov, 2013). There is a

distinction between the research subjects studying learner autonomy in blended learning and face-to-face learning since some studies look into elements that influence learner autonomy (Goulão & Menedez, 2015). Ghufron and Nurdianingsih (2019) presented how the flipped teaching method with Computer Assisted Language Learning (CALL) functions to teach EFL writing in the Indonesian setting. The study investigated in further detail how the teaching model impacts learner autonomy and suggested 5 main aspects of learner autonomy including Evaluation of the English teacher's aims and requirements, Evaluation of establishing studying goals and plans, Evaluation of the learning strategy's implementation, Evaluation of the ability to monitor the usage of learning strategies, Evaluation of EFL writing process.

The Effects of Blended Learning on Students' Learning Autonomy in International Settings

In recent years, research on the effects of blended learning on autonomy from the perspective of learners has attracted the attention of many researchers. McHone (2020) states a close relationship exists between students' autonomy and blended learning implementation. Besides, Mrajca and Polok (2021) stated that blended learning activities positively affected the development of learners' autonomy. Chen (2022) created a blended translation course to ascertain if blended learning enhances student autonomy and administered a survey. The findings indicate that most students believe blended learning to be a successful strategy for fostering learner autonomy. Wang and Zhang (2022) also emphasized that an educational approach that can enhance students' awareness and behavior of autonomous learning is necessary, given the importance of developing students' capacity for autonomous learning. The findings suggested that an optimal blended learning environment would foster the motivation of foreign language learners to learn and develop their capacity for independent learning, ultimately leading to the development and enhancement of their autonomous learning behaviors (Wang & Zhang, 2022). In addition, Heriyawati et al. (2023) investigated how EFL students feel about blended learning implementation to support learning autonomy in English language instruction, especially in writing classes. The findings show that students were strongly encouraged to do more on their own through blended learning. Additionally, blended learning outlines the learner's aims and goals, which aids in their success as they acquire knowledge (Heriyawati et al., 2023). Similarly, in the study of Mohammed et al. (2023), the participants had more positive attitudes toward blended learning implementation and may possibly have thought of it as the new norm. Most of them have shown signs of being thoughtful, self-aware, driven, and independent—qualities associated with autonomous learners (Mohammed et al., 2023).

The Effects of Blended Learning on Students' Learning Autonomy in Vietnam

Several studies in Vietnam also highlighted the effectiveness of applying blended learning in enhancing learner autonomy. Bui and Vu (2020) applied blended learning in a university writing course, in which the students participated in a range of autonomous and interactive learning activities. The results showed that this blended learning approach improved students' writing proficiency, gave them useful abilities for the twenty-first century, and generated learning autonomy (Bui & Vu, 2020). Similarly, Nguyen and Le (2021) conducted a study on

the impact of a learning management system on learner autonomy at a university in Central Vietnam. The authors claimed that the EFL students in this study appear to be aware of how the LMS enhances their independent learning by the fact that they can initiate, monitor, and evaluate their learning process. The potential of online learning was investigated by Nguyen and Phuong (2022), including the following skills: (1) organizing learning activities, (2) assessing performance, (3) setting goals, (4) managing the learning process independently, and (5) accepting accountability for learning choices. Pham (2023) also investigated teachers' strategies to support learner autonomy in a blended learning environment. The results of this study show that teachers used a range of techniques, such as procedural, cognitive, and organizational support for learner autonomy, to foster that autonomy (Pham, 2023). According to Nguyen (2023), students' perceptions toward using blended learning (Google Docs) for group writing were positive. Furthermore, learners, particularly those at lower levels, have advanced their technological and social abilities (Nguyen, 2023). In addition, the study of Cao (2023) also mentioned many advantages available to EFL students through LMS, such as improved engagement and autonomy, adaptable learning and activities, and efficient course administration.

Research Gap and Research Questions

Through the review of the above studies, the influence of blended learning on learner autonomy attracted moderate interest from authors around the world and in Vietnam. However, it can be realized that besides the positive effects, are there any elements of blended learning that have not really enhanced learner autonomy? Both sides of the issue need to be considered more carefully, especially in the context of teaching at Vietnam National University (VNU), where no research addresses this issue. Therefore, it is important to study the perceptions of students about the effect of blended learning on their learning autonomy. The purpose of the study could be achieved by answering two research questions:

1. What are the positive effects of blended learning on students' learning autonomy?
2. Are there any blended learning elements that have not enhanced learner autonomy?

Methods

Pedagogical Setting & Participants

This study involved 120 students from four General English classes that I was assigned to teach directly in the 2023–2024 academic year at VNU. The learning aim for these English classes is the B1 level, or Level 3 in the 6-level Foreign Language Competency Framework.

In the English learning program, in addition to face-to-face lessons in class, students were also provided with a system of self-study lessons, an integrated system through the LMS support tool of the Faculty of English, referred to as an "online program." This program includes five lessons, each of which has four parts: listening, reading, speaking, and writing corresponding to the topic, vocabulary, and structures learned in class.

The purpose of the online program is to give learners the opportunity to interact more with the content they have been learning in class through additional language practice exercises, with the desired level being B1. Besides, learners are enabled to be more familiar with learning English according to the 4 sub-skills of Listening, Speaking, Reading, and Writing and have access to the final exam format. The online program focuses heavily on individual exercises, emphasizing learner autonomy.

Data collection & analysis

To investigate students' perceptions of the effect of blended learning on their learning autonomy, I used questionnaires as the main research tool. A questionnaire is a research tool made up of a set of questions meant to elicit information from respondents (Seliger & Shohamy, 1989). Compared to other survey formats, questionnaires are less expensive and require less work from the researcher. In this study, I adapted the questionnaire on the effects of blended learning on learner autonomy of Ghufron and Nurdianingsih (2019), including five factors related to teachers' aims and requirements, learners' motivation, establishing studying goals and plans, implementing learning strategy, and EFL learning process. The questionnaire contains 15 statements adopting a 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree) to elicit the participants' opinions.

Besides, the interview method was used to learn more deeply about the reasons for the participants' choices and clarify some points that were not shown in the questionnaire. The interview includes 10 questions based on emerging issues from the research questions. In addition, to help the students understand the subject and express their opinions more clearly, I offered them the option to speak in Vietnamese during the interviews.

Results/Findings and Discussion

Research Question 1: What are the positive effects of blended learning on students' learning autonomy?

Based on data obtained from the questionnaire, blended learning positively influences learner autonomy in three main aspects related to teachers' aims and requirements, learners' motivation, and the EFL learning process. The results of the questionnaires related to these three factors are presented in Table 1 below.

Table 1.

Positive effects of blended learning (BL) on students' learning autonomy

Factors related to teacher's aims and requirements	Mean	Standard Deviation
BL helps learners be fully aware of the objectives that teachers have set.	4.22	0.57
BL enables learners to incorporate the teacher's objectives into their own.	4.31	0.53
BL increases the learners' ability to follow the teachers' pace.	4.05	0.65
Factors related to learners' motivation		
BL increases learners' interest in EFL learning.	4.53	0.55
BL enables learners a safe, uninterrupted learning environment.	4.48	0.56
BL helps learners to become accustomed to using technology.	4.53	0.52
Factors related to the EFL learning process		
BL assists learners with a variety of means to practice English skills.	4.31	0.81
BL provides learners with self-assessment to realize their own mistakes	4.39	0.51
BL allows learners to receive timely feedback from teachers.	4.13	0.60

Table 1 shows that students have positive attitudes about all three aspects ($M > 4$). Besides, every factor had a small standard deviation ($SD < 0.9$), indicating that the data were closely dispersed around the mean. It can be seen that blended learning has the greatest impact on learners' motivation ($M = 4.48-4.53$). This was confirmed and further explained by the students in the interview. One student said:

The online exercise system on LMS helps me understand the topics learned in class more deeply and access many Mock tests to review for the final exam. The exercises are designed in a variety of ways, making us feel very excited. (S1)

Another student said that because the LMS exercises focus a lot on individual exercises and have weekly deadlines, they can train students to be highly self-disciplined in learning (S2). Sharing the same views, in Wang and Zhang's (2022) study, the authors also highlighted how learners' motivation and capacity for independent learning would be enhanced in a perfect blended learning environment. This would ultimately lead to learners' autonomous learning practices through blended learning. Similarly, Heriyawati et al. (2023) stated that blended learning highly motivates students to work more independently.

Besides, many students agreed that blended learning enabled students to be familiar with utilizing technology ($M = 4.53$). In the interview, one student shared that:

This is the first time I have done an assignment on LMS. But the system is quite easy to use and user-friendly, so I was able to get used to it quickly. Doing homework on the system makes me more advanced in using technology. (S3)

This view aligns with the results of Nguyen (2023) who claimed that students improved their social and technological skills, especially those at lower levels. Just like Nguyen's (2023) study, the students participating in my study were also students with quite low levels of technology and had not previously been exposed to much online learning. Therefore,

exposure to the LMS system in blended learning made students very excited. One student also affirmed that: *“Doing exercises on LMS helps me feel more confident when taking online tests. We were introduced to how to do assignments directly on the system, submit assignments, attach files, and record speeches”* (S4).

Besides, blended learning can provide learners with self-assessment to realize their own mistakes (M= 4.39). In the interview, one student expressed her satisfaction when doing homework on the LMS system. She said:

On the LMS, after we complete all the questions of skill, the answer icon will appear, accompanied by the answer and explanations automatically given by the computer. This helps me self-evaluate my work and know my own mistakes in the exercises. (S5)

With skills such as writing and speaking, students also expressed satisfaction when receiving feedback from teachers. One student shared that, *“Following a brief amount of time, the teacher would grade each assignment submitted through the LMS and update the score with any comments or suggestions. This has been incredibly helpful in identifying my areas of strength and improvement”* (S6). The learners’ self-assessment enhancement was also reported by Nguyen and Le (2021) when the authors claimed that learners can monitor and assess their own learning through blended learning. The authors also revealed that as the scores on LMS were private to students, they would not feel ashamed in front of their peers if they had a low score. Another student also said, *“If there are still unfinished questions, the answers will not appear. Therefore, we will have to be more responsible and conscious of completing all exercises”* (S7). Similarly, Mohammed et al. (2023) also stated that blended learning could make students exhibit traits linked with autonomous learners, such as thoughtfulness, self-awareness, and independence.

In addition, it can be seen that blended learning can also enhance learner autonomy in terms of acquiring teachers' aims and requirements. All participants agreed that through blended learning, students can integrate the teacher's goals into their own (M= 4.31). One student explained this more clearly:

The focus exercises of each week are different sub-skills to give students the opportunity to practice many skills and be assessed more comprehensively. Through that, we understand the objectives that teachers set in class and apply them to practical exercises on LMS. (S8)

This finding was mentioned in the study of Heriyawati et al. (2023), which showed that blended learning helps learners succeed as they acquire the objectives from the teachers. Similarly, Nguyen and Phuong (2022) also claimed that blended learning enables students to define short- and long-term goals. Furthermore, it is consistent with studies that show that an online learning environment might promote students' awareness of their learning objectives (Ribbe & Bezanilla, 2013).

The above results show that participants have a positive attitude about the influence of blended learning on enhancing aspects of learning autonomy. Despite the high consensus on the above aspects, some factors remain that students do not agree with or express neutral opinions about. These aspects are presented in the next section.

Research Question 2: Are there any elements of blended learning that have not really enhanced learner autonomy?

The survey results show that no factor does not really positively affect learners' autonomy. Besides the factors that 100% of students agree with, some aspects still have neutral or disagreeable opinions. Two factors related to goal setting and strategy implementation are presented in Table 2 below.

Table 2.

Factors related to goal establishing and strategy implementation

Factors related to establishing studying goals and plans	Mean	Standard Deviation
7. BL makes it easier for learners to organize autonomous study time.	3.32	0.56
8. BL helps adjust learners' studying plans based on their progress.	3.41	0.70
9. BL assists learners in setting realistic objectives for themselves.	3.43	0.68
Factors related to implementing a learning strategy		
10. BL allows learners to completely understand the learning strategy.	3.68	0.76
11. BL lets learners deliberately use techniques to enhance English proficiency.	3.91	0.79
12. BL enables learners to identify and address issues with learning strategy.	3.79	0.93

Table 2 shows that in the blended learning process, not all students were able to set their own study goals and plans ($M < 3.5$). Although blended learning allows students to plan their assignments according to their own schedule, some students did not have the ability to manage time, leading to a situation where weekly assignments on the LMS were not completed on time. One student shared that,

During the semester, there were times when I had to study for many subjects, so I couldn't complete my assignments on LMS. This caused my assignments to be overdue. I have to ask my teacher for permission to make up work at the end of the semester. (S9)

This opinion was also reported in the study of Nguyen and Le (2021) when students acknowledged that they only utilize the LMS three or four times a week on average, mostly because most of the courses required them to complete assignments or group projects.

Besides, I observed that while blended learning encouraged students to participate in the learning process, their attitude toward learning also played a role. Students who engaged in the LMS with enthusiasm and a positive outlook frequently accessed it more frequently than

those who did not use it for academic purposes. One student admitted, *“I feel a bit lazy in completing lessons on LMS. Even though I thought the LMS' s exercise system was helpful, I still signed on to complete the assignment when the teacher reminded me that it was almost due”* (S10). This subjective difficulty on the part of the learner has been reported by Pham (2021). The majority of students are accustomed to the conventional high school learning model, which involves passively learning while having a teacher close by to provide guidance (Pham, 2021). As a result, when using the blended learning approach in the classroom, students will experience anxiety, despair, and lower learning results since they will not be able to select an appropriate learning strategy.

Although the factors related to implementing the learning process achieved mean scores that were not too low ($M > 3.5$), the results showed that some students still expressed a neutral opinion. As indicated by their responses in the interviews, most participants logged into the LMS almost daily. They did this for the same reason: knowing that completing assignments on the LMS counted toward the course assessment. One student said *“I frequently checked the system to make sure I didn't miss any latest information or assignments from teachers and classmates”* (S11). However, some other students stated that the regularity with which they checked their learning progress on the LMS was contingent upon the course requirements. One student shared his ideas:

Although the exercises on the LMS are very close to the program and are a useful source for me to review, I think they only account for a small part of the total score, so sometimes I am quite lazy to complete the assigned assignments there. (S12)

They would not check-in or update information too frequently if the course was unimportant. This demonstrated that each student's level of learning consciousness affected the monitoring of the learning process on the LMS. This finding was similar to the opinions of participants in Nguyen and Le (2021) who also showed that students had to complete a significant number of assignments on LMS. In addition, this factor causes students to feel bored and lazy. This demonstrates that in order to enhance learning autonomy within the context of blended learning, students must be proactive, responsible, and aware of their central role in the process. As a result, it is crucial that instructors create a good number of interesting and pertinent assignments for the learners on the LMS, as this will greatly encourage their independent study.

Conclusion

This research was conducted with the participation of 120 students from four General English classes that I was assigned to teach directly in the 2023–2024 academic year at VNU. With the purpose of investigating students' perceptions of the effect of blended learning on their learning autonomy, I combined quantitative and qualitative methods through questionnaires and interviews. Among five factors related to learning autonomy based on the classification of Ghufon and Nurdianingsih (2019), the results show that blended learning has enhanced

learners' autonomy in all aspects. That is a positive result, showing that the trend of teaching and learning according to the blended learning model is an inevitable trend in the future.

Among the factors investigated, blended learning had the largest impact on learners' motivation. Blended learning, with its varied fitness program and flexible study schedule, can make students more interested in studying English as a foreign language. It also gives them the chance to learn in a secure, distraction-free environment and get used to utilizing technology. Besides, participants concurred that the blended learning exercises provided them with a great chance to assess them and get prompt feedback from educators. From there, students can actively participate in their EFL education and understand the objectives and demands of their teachers. However, besides some factors that receive agreement from all students, there are also aspects where blended learning has not really enhanced learner autonomy. It is interesting to see that these aspects are mainly subjective factors related to the learning attitude of the learners. Some students are still lazy and do not have the time management skills to complete assignments autonomously on LMS. Therefore, not all students can set their own study goals and plans or identify and address learning strategy issues.

This study hopes to provide teachers with an overview of the effectiveness of applying blended learning in the classroom. Teachers must create and offer various learning resources that are appropriate for students' skill levels to implement the blended learning approach in the classroom and grab students' attention. In order to accomplish this, educators must devote more time to research, information technology applications, software support for lesson design, and pedagogical modifications. Besides, teachers need to plan in detail the teaching schedule and clearly state the combination ratio used in the Blended learning model (what percentage is used for the traditional learning model, what percentage is used for the online learning model) so that learners can proactively arrange their study time accordingly. Additionally, teachers must provide clear instructions and Internet communication channels so that students can readily access self-study materials. This will allow them to provide their students with help, feedback, and encouragement. Most importantly, in my opinion, to successfully apply the blended learning model in teaching, in addition to investment and changes from the school and teacher, the main factor is still the learner himself. Learners need to change their own perceptions and find appropriate self-study methods to maximize the effectiveness of the blended learning model.

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Appendix 1 – Questionnaire

Students' Perceptions of the Effect of Blended Learning on their Learning Autonomy

Hi, everybody. I would like your help with this questionnaire, which is the major source of data for my paper. Thank you very much!

Circle the number that best describes your choice.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Factors related to teacher's aims and requirements	Likert Scale
1. BL helps learners fully aware of teachers' objectives.	1 2 3 4 5
2. BL enables learners to incorporate the teacher's objectives into their own.	1 2 3 4 5
3. BL increases the learners' ability to follow the teachers' pace.	1 2 3 4 5
Factors related to learners' motivation	
4. BL increases learners' interest in EFL learning.	1 2 3 4 5

5. BL enables learners a safe, uninterrupted learning environment.	1	2	3	4	5
6. BL helps learners to become accustomed to using technology.	1	2	3	4	5
Factors related to establishing studying goals and plans					
7. BL makes it easier for learners to organize autonomous study time.	1	2	3	4	5
8. BL helps adjusting learners' studying plans based on their progress.	1	2	3	4	5
9. BL assists learners in setting realistic objectives for themselves.	1	2	3	4	5
Factors related to implementing learning strategy					
10. BL allows learners to completely understand the learning strategy.	1	2	3	4	5
11. BL lets learners deliberately use techniques to enhance English proficiency.	1	2	3	4	5
12. BL enables learners to identify and address issues with learning strategy.	1	2	3	4	5
Factors related to EFL learning process					
13. BL assists learners with a variety of means to practice English skills.	1	2	3	4	5
14. BL provides learners with self-assessment to realize their own mistakes.	1	2	3	4	5
15. BL allows learners to receive timely feedback from teachers.	1	2	3	4	5

Appendix 2 – Suggested Reflection Questions

1. Please briefly describe the characteristics of an autonomous language learner.
2. What do you think of the blended learning model? Have you ever learned this model in other subjects?
3. To what extent do you think blended learning can improve learner autonomy?
4. What are some activities of blended learning that promote learner autonomy? How?
5. Which is the best aspect that blended learning can affect learning autonomy in your opinion?
6. Are there any blended learning elements that have not enhanced learner autonomy?
7. What is the most challenging thing of learner autonomy you encountered in a blended learning environment?
8. Do you think you are more affected by objective or subjective difficulties? Why?
9. How did you solve those difficulties?
10. What would you suggest to apply blended learning to enhance learner autonomy effectively?

Biodata

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An Investigation into Students' Perceptions of Creating Student-generated Digital Videos in PBL at Saigon University

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ABSTRACT

Keywords: student-created video, Project-based learning (PBL), student's motivation and engagement, pedagogical models, learning practices

Digital video is a promising technology that can be utilized in schools to support, expand, or transform teaching methods and curriculum results. Particularly, it has the potential to apply student-generated digital videos to improve students' learning practices and outcomes. The aim of this study is to explore students' perceptions of the application of student-generated videos in Project-based learning (PBL). With the qualitative method approach, the instrument of semi-structured interviews and students' reflections were employed as the primary method of data collection. The participants were sophomores majoring in English linguistics and English pedagogy at Saigon University. Despite some limitations, the results indicate that the project of making student-generated digital videos yields some positive benefits for the students to develop their creativity and social skills.

Introduction

With the rapid rise of scientific breakthroughs, especially in technology, the utilization of video-generated videos in project-based learning (PBL) tasks is becoming more and more prevalent in many educational contexts. Short clips and videos serve as an effective pedagogical tool for teachers to engage students in their learning process so that the students can proactively become content creators. Learners could apply some of their background knowledge to solve plenty of real-life situations and unexpected problems while making their videos, which in return can stimulate their intrinsic motivation (Kearney & Schuck, 2006; Robin, 2008). Similarly, according to Hung et al. (2008), students' social skills such as problem-solving, critical thinking, communication, and self-learning skills can be upgraded thanks to the integration of video-producing activity and the use of multi-media sources, which is proven to be extremely useful for setting up PBL models in studying scenarios. Therefore, to enhance students' engagement and foster deeper learning experiences, at Saigon University, digital video activity in PBL was

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implemented in the last semester with the aspiration that authors can investigate the efficiency of this method in boosting student participation, learning outcomes, and learner autonomy. Additionally, this study explores the potential benefits and limitations of employing digital video production as a pedagogical tool in PBL at Saigon University, drawing on student perceptions and educational theory.

Literature review

Project-based learning in Language Teaching and Learning

Today, Project-based learning (PBL) is widely recognized as an effective method for teaching English as a second language. It enables students to share their thoughts on various topics, pose questions, make predictions, and formulate theories (Pham et al., 2023). PBL also encourages the use of diverse tools and skills within meaningful, real-life contexts, fostering problem-solving and creative thinking both inside and outside the classroom.

According to Cocco (2006), Project-based learning (PBL) is grounded in three key principles of constructivism: it emphasizes context-specific learning, requires active engagement from students, and relies on social interaction and the exchange of knowledge to meet educational objectives due to a fact that this learner-centered approach can incorporate elements of experiential learning, emphasizing active engagement and reflection rather than teacher-led methods with passive involvement.

Benefits of the project-based learning approach

Numerous studies have shown that giving projects in class allows students to explore their authentic knowledge and skills (Mali, 2016; Wahyuningsih et al., 2023). Project-based learning is proposed as an educational tool for improving language skills, especially in English, as it emphasizes student-centered learning and real-world applications (Thomas et al., 1999). Also, Project-Based Learning (PBL) can be a powerful motivator that significantly boosts student engagement in correlation with the increase in students' intrinsic deeper understanding of the subject matter. It is indicated in the research of Bell (2010) that PBL creates a context where learning is directly linked to real-world problems, making the learning process more meaningful, and students are "more motivated when they see the practical applications of their learning." Thomas et al. (1999) highlight that Project-based learning (PBL) can offer opportunities for students to improve their problem-solving, critical thinking, communication, and collaboration skills through meaningful, complicated tasks that require analysis, synthesis, and evaluation (Thomas, 2000). Therefore, this method can be beneficial to students' development in both academic and professional settings, encouraging students to work on projects over a long time developing various cognitive, social, and emotional skills that traditional teaching methods might not address, including the creation of English as a Foreign Language (EFL) materials in teaching methods and learning systems (Delimasari et al., 2023; Sundari & Leonard, 2020).

Additionally, Project-based learning (PBL) can foster students' collaboration, verbal communication, teamwork, and creative abilities during the stages of working together on the

assigned projects (Supe & Kaupuzs, 2015). According to Krajcik and Blumenfeld (2006), collaborative tasks can assist learners in developing their personal viewpoints, shared responsibility, and problem-solving skills. Due to the nature of the activity, learners can experience real-life situations and obtain different learning styles and practice skills from others simultaneously when they work together on this kind of project.

Learners are considered the center of the learning process in Project-based learning instead of the teacher-centered model in traditional approaches. In other words, learners must be independently involved in the active learning process to produce their own products and improve themselves. Specifically, students are empowered to actively plan, research, and complete their projects in PBL. Consequently, thanks to this learning autonomy, important skills like time management, decision-making, and self-assessment are constructed; thereby, students can gain better learning outcomes (Holm, 2011).

Similarly, learners are encouraged to solve real-world problems, enhancing their creativity and innovation while completing tasks and assignments in and after class. That means PBL allows students to apply different and new approaches to problem-solving, promoting out-of-the-box thinking and experimentation (Larmer & Mergendoller, 2010). This practice does not only polish learners' professional expertise but also innovative mindsets that are necessary for the current fast-changing job market.

Video-based tasks in English language classrooms

Tasks are a crucial component of teaching and learning English, serving as a framework for teachers to develop a variety of classroom activities because well-designed tasks can boost student motivation, making English lessons more engaging and enjoyable (Tran, 2022). The effectiveness of tasks is typically measured by the level of student engagement and their overall satisfaction with the activities. Henceforth, the use of student-produced videos in foreign language education has become increasingly common as videos offer a strong combination of visual and auditory input, helping students absorb and understand language content more effectively (Tran, 2022). Advancements in technology, such as smartphones with the rise of digital editing tools like Windows Movie Maker and Capcut, along with social media platforms like YouTube and TikTok, have driven a shift towards constructivist teaching methods (Truc et al., 2023). In addition, Koksai (2004) noted that videos not only capture students' attention but also stimulate their imagination and enhance long-term memory by creating strong auditory, visual, and mental connections. As a result, this trend emphasizes project-based learning, giving students the opportunity to create their own video projects, actively participate in discussions, and become more engaged and self-regulated in the learning process (Dahya, 2017).

Previous studies on the utilization of student-generated digital video

In Tongsakul et al. (2011) research, findings indicate that students who make their own videos can learn more actively and engage more in this activity. They feel more in control of their learning and can express themselves creatively. According to Thomas et al. (1999), student-generated digital videos can cultivate a more dynamic and engaging learning environment by empowering students to take ownership of their educational pursuits. By making videos, students learn important skills like writing scripts, presenting, and editing pictures. This helps

them become more active learners.

What is more, video-making can offer a valuable platform for “self-reflection and assessment”, fostering a “deeper connection between personal experiences and learning (Widodo et al., 2016). Students can share their thoughts and feelings through videos. Kearney and Schuck's (2006) research suggests that making videos enables students to engage in “metacognition,” critically evaluating their own performance and identifying areas for improving themselves. This reflective process can be beneficial because it matches the principles of PBL, which emphasizes continuous improvement and self-directed learning.

The idea of using student-generated videos (SGV) as a helpful tool in an English learning environment is clearly illustrated in Naqvi's research (2015). Ultimately, this application supports learners in constructing knowledge actively and boosting their learning motivation. Engin (2014) recommended that integrating modern technology with active learning strategies can be the potential of SGV for second language acquisition due to the fact that SGV can cultivate critical thinking, collaboration, and creativity among students. A main advantage of incorporating SGV into project-based learning (PBL) is the active engagement it requires from learners.

Almutairi (2018) demonstrates that using student-generated digital videos positively promotes collaboration in the context of PBL. The researcher agrees that making digital videos can encourage students to develop many social skills like interpersonal, communicative, and problem-solving skills. These skills are important for both the student's academic success and future career paths. While working with their teammates for this video-making project, the students would cover different roles, share responsibility, and consider various ideas to produce a final product. Hence, it helps students to grow a strong sense of engagement with their group members and the topic.

The importance of promoting the use of technological learning tools in general and student-generated videos in particular is illustrated by the research of (Hoe et al., 2019). Through the process of participating in video-making tasks, students can improve their digital skills, such as editing video clips, and they can also tap into the field of digital communication. Such skills are undoubtedly necessary in the modern learning environment, especially in the 4.0 era where technological communication is a must.

Research Questions

To fulfill the purpose of the study, here is the research question:

How do students perceive student-generated digital videos (SGDV) as a tool for engaging in learning activities?

Methods

Pedagogical Setting & Participants

The participants were chosen through the use of convenience sampling, which was motivated by the notion that these students would be more qualified to respond to inquiries. Put differently,

they were seen as examples with a wealth of information that was relevant to the current study (Creswell & Poth, 2016; Palinkas et al., 2015). All of the participants in the interviews were studying in the module Listening-Speaking 4 at Saigon University. Three students were in the interview phase, and 20 participated in reflective activity. Before requesting their participation in the study, they were given an information sheet outlining the importance of the research. In terms of demographics, all of the participants were full-time students from a variety of age groups. For reasons of confidentiality, no participant's personal information was included in this study. For instance, the students were identified using codes.

Design of the Study

This study employs a qualitative approach as the primary research method since the researchers would like to explore the in-depth data from the students regarding their experience of making SGD.V. To be more specific, the objective of this study is to investigate the students' perceptions towards the production of creating a digital video for a particular group-based project. This is the reason why qualitative data collected would be preferable to numerical data, and on top of that, the effectiveness of implementing semi-structured interviews and reflections will be more appropriate in qualitative research.

In terms of the first method tool, the advantages of using semi-structured interviews in qualitative research have been proven in many studies over the last few decades. A number of experts have noticed the positive side of interviews. For instance, Kvale (1996) indicates that discussions between interviewers and interviewees could provide a lot of insightful information and, thereby, are suitable for topics or concepts that need in-depth explanations to support the findings instead of just numerical statistics. On the same side, according to Ramsook (2018), through informal conversations or daily dialogues, the researchers can collect valuable data and, at the same time, understand the related experiences of participants in a more complete way. Furthermore, scholars and researchers also highlight the flexibility of semi-structured interviews in matching the demands of different topics catering to different participants (Marshall & Rossman, 2014; Silverman, 2017). As a result, interviews are mainly used in qualitative research thanks to their adaptability.

Regarding the second qualitative tool in the research, collecting reflections is similar to giving structured interviews in written form (Creswell et al. 1, 2016). Owing to time constraints and the study's small scale, reflective tasks are the most fitting choice for this research to collect more data. This approach allows researchers to save time on transcription and reduces the need for multiple face-to-face interviews while still capturing in-depth data on the emotions, attitudes, and opinions of the participants.

Since the purpose of this study was to explore the experience and participation of students in the production of SGD.V, the researchers decided to implement semi-structured interviews and students' reflections as the key research instruments. The responses from the students were collected from the design of some open-ended questions on the interview list. Thus, the purpose of the interviews was to gather in-depth information and thoughts on the usage of digital video clips in the classroom from a small number of individuals who were thought to have firsthand experience with these applications. Because they were thought to offer the potential to acquire

rich data, interviews were explicitly chosen as data collection devices. Online interviews via Zoom were used in the present study by the researcher, which allowed the participants to divulge more information.

Data collection & Analysis

The primary goal of the qualitative data analysis was to answer the study question of how students use SGD V in higher education pedagogy to increase their participation in class activities. Large amounts of data were produced during the gathering of qualitative data, and interviews were analyzed thematically.

The researchers were allowed to record audio and transcribe files for online semi-structured interviews with the students. Following a Word entry of the interview replies, a cross-case analysis was performed to reveal the general themes in the responses. We also calculated and provided concept frequencies for every participant. A written report summarizing the interview findings conveyed the main ideas and perspectives held by the participants. Additionally, the reflective tasks collected from a larger scale of participants were conducted simultaneously with a similar process in data collection and analysis.

Results/Findings and Discussion

Overall experience of student-generated digital videos

All of the participants gave positive feedback regarding the general experience of making and editing videos as a task in the studying course. The first reason mentioned was that the application of student-generated videos was a completely new method of completing their assignments. Previously, the students had to write essays or perform group presentations, but the process of creating digital videos for projects was exciting and motivating as this was nearly their first time doing such a project. Another compelling reason worth mentioning was the valuable practice it provided as a way to deepen the comprehension of the speaking topic. This was due to the fact that these videos frequently simplified difficult ideas by presenting them in more approachable and interesting ways. The cooperative process of filming also fostered a stronger bond with the subject matter. Finally, it was the brand-new experience of talking to complete strangers from other countries that the student took into consideration. For some of them, it was challenging at first as it was their first time communicating with random foreigners; however, it turned out to be enjoyable.

A few quotes from the interviews are listed below.

“My overall experience is that it is very interesting. Because it is a very different way for students to learn and do their projects.” (S1)

“My experience with this project was really positive. It was my first time speaking with foreign strangers, so I felt a bit nervous at first. However, I ended up enjoying the conversation with them.” (S2)

“So, in my opinion, my overall experience with student-generated videos in the course has been largely positive, and they offer valuable exercise and diverse perspectives that

enrich our understanding of the subject matter.” (S3)

The benefits and challenges of making student-generated digital videos

There were some of the potential benefits for the students while producing student-generated videos. First and foremost, student-produced videos could help to increase student ownership of their education and foster active participation and creativity by providing a more dynamic, individualized learning environment. Allowing students to convey topics uniquely was a fantastic method to encourage them to participate actively in their learning process. Students might attempt something new, and while creating the film, they could get the opportunity to interact with a lot more things, such as programs and applications that were used to make and edit films.

A few quotes from the interviews are included below.

“So, by doing this, I have a chance to engage in a lot more stuff like applications that are used to create videos, like that.” (S1)

“I think it is a great way to help students to take an active role in their learning, letting them present ideas in their own way. It is also motivating because students could try something new” (S2)

“Student-generated videos boost motivation and engagement in giving students ownership of their learning in culturing active, involvement with the material and allowing creative expression.” (S3)

On the flip side, some of the obstacles were brought up during the procedure of making a video. Firstly, technological problems like inadequate video or audio editing quality and restricted equipment or software access are frequently the cause of these challenges. It was sometimes problematic for the students to manage their time, organize their topic, and make sure the video satisfied the requirements of the project. Cooperation among peers might provide certain difficulties as well. Furthermore, it was difficult to start a discussion with a complete stranger and invite them to participate in the interviews.

Below are a few quotations taken directly from the interviews.

“Some of those applications are hard to approach. For example, I remember an application named Adobe. That application is pretty hard for a newbie like me who generates a video for the first time.” (S1)

“In addition, starting a conversation with a total stranger and asking them to join our interviews was kind of hard because we are somehow scared like scared of the people like different people strangers.’ (S2)

“I think the difficulties here often include technical issues like poor video or audio quality editing and limited access to equipment or software. Furthermore, students may struggle with time management, content organization, and ensuring that the video meets the assignment’s criteria collaboration in coordination with peers can also be some challenges.” (S3)

The collaboration among the team members

In order to effectively collaborate with teammates, the students arranged meetings to discuss ideas, assign tasks, and establish deadlines. Regular communication and a clear division of roles were also essential. In the production stage, they exchanged resources and offered constructive feedback on one another's work. As a result, this project actually created a beautiful and natural bonding among team members.

When being asked for a self-evaluated score, all three students agreed that they did quite good in this project, regardless of their different roles in the team including a team leader, an interviewer and an editor. However, without their teammates' support, it would not be that great as a whole.

Some direct quotes from the interviews were included here.

“So, making a video can create a bonding relationship between friends. Thanks to it, I and my other teammates are now pretty close friends.” (S1)

“First, we just divided the task based on the poll on our group. Two people worked on the questionnaire to interview, one took on the role of cameraman and one edited the clip. Additionally, after reviewing the first version of our questionnaire, which is like a little adjustment to make it suitable for reality.” (S2)

“Collaboration with teammates typically involves regular communication and clear role division, we hold meetings. To brainstorm ideas, assign tasks and set deadlines.” (S3)

The connection of prior knowledge to vlogging goals

In response to this query, the participants shared about making a connection between their past learning and vlogging objectives by using experiences and current knowledge to guide the development of content. They applied the prior knowledge to guarantee accuracy, offered insightful commentary, and matched the material to the interests of the viewers.

Below are some statements made from the interviews.

“Because we are going to the historic place, I need to recall all the knowledge tablet in history about relating to the place that I went or the place that I did in the project.” (S1)

“I needed to use my prior knowledge of the topics that we chose to decide the questions we will be asking during the interviews.” (S2)

“To this question, I connect my prior knowledge to my vlogging goals by leveraging my existing expertise and experiences to inform content creation. I use my background to provide valuable insights, ensure accuracy, and add that to my vlogs, aligning my content with my goals and audience interest.” (S3)

The emotional engagement of making digital videos

All three participants shared similar opinions regarding the emotional aspects that they experienced while creating a video for this course. In the first place, it was joyful and exciting for the students to produce an amateur video clip by themselves for the first time. Simultaneously, it offered the opportunity to collaborate with different team members and get

insights into their backgrounds, gaining expertise in leadership and communication skills. In addition, this was a rare opportunity for them to have some direct conversations with meet and converse with many incredible people from various nations and cultures, which might be one of their fears beforehand. On top of that, the hands-on experience with some of the video editing and producing applications also promoted a stimulating emotion.

The statements from the interviews are included below.

“Well for me, the aspect of creating video that makes me excited and happy. At the same time, it is the fact that I get to work with a lot of people I get to work with a lot of members, and I get to know more about them” (S1)

“I think like I'm really interested; I really interested and enjoy doing the interview I think like the video is one of my most memorable memories in my, in my cell phone more year at the chance to meet and talk with a lot of amazing people from different country, different countries, different cultures” (S2)

“In my opinion, creating videos often makes me happy and excited because it allows me to express creativity and share knowledge. Uh, I'm curious about exploring new techniques, and learning about emerging chains in video production” (S3)

The results collected from the reflections

Students' perceptions obtained from the reflection sessions were synthesized to support the findings of the research question. Therefore, the main themes were identified into sub-themes: 1) the overall experience of student-generated digital videos, 2) the benefits and challenges of making student-generated digital videos, and 3) The collaboration among the team members, 4) the connection of prior knowledge to vlogging goals, and 5) the emotional engagement of making digital videos.

Table 1

shows a thematic analysis illustrating the themes and key contents of the reflections

Sub-theme	Description	Students' Commentaries
Overall experience of student-generated digital videos	The majority of the students agreed that SGD V was interesting and rewarding despite the fact that it was challenging.	<ul style="list-style-type: none"> • “My overall experience with the videos is that they are fun, informative, and engaging.” • “Honestly, it was pretty challenging but also really fulfilling.” • “This experience has been really fascinating.” • “Making videos makes learning fun and interesting. It brings lessons to life.”
The benefits and challenges of making student-generated digital videos	Most of the participants mentioned the benefits of SGD V in the learning process: promoting	<ul style="list-style-type: none"> • “I think it can promote their creation, also creating the interesting in the PBL.” • “Creating videos makes us excited and more willing to participate because we get to be creative and share ideas.”

	<p>creativity, engaging in the learning process, and encouraging teamwork.</p> <p>In contrast, some of the challenges mentioned included technological adoption (editing videos), teamwork conflicts, and interacting with foreigners.</p>	<ul style="list-style-type: none"> • “I feel like I am actively contributing to the learning process rather than only consuming information when I make movies, which increases my enthusiasm to study.” • “I think it made us to think out of the box more in the video making process. Moreover, I feel more confident to join with my teammates to do this task as I couldn’t finish it alone.” • “I think the technology adoption is the most difficult for students when creating a project.” • “Difficulties include irresponsibility of some members which slows down the progress of the group.” • “Some of these include technical problems, learning video editing, and working within the limitations of equipment.” • “Interacting with foreigners was somehow difficult because I didn’t have the experience.”
The collaboration among the team members	<p>The students mostly agreed on the process of collaborating among team members, in which they arranged meetings, distributed tasks, and set up deadlines. Whenever unexpected problems came, the group would find an agreed solution together.</p>	<ul style="list-style-type: none"> • “I will let each members give their own strategy and we will discuss together to decide the best option for our project.” • “We come up with ideas and agree on them together. Then we divide the work based on each person's strengths.” • “We brainstorm ideas together, split tasks, and help each other when needed.” • “At the beginning, we divided roles based on who felt most comfortable with certain tasks, like editing or speaking in front of the camera. We had regular online meetings to check in and talk through any issues, and if someone got stuck, the rest of us would try to help out.” • “We divided the work among ourselves and worked together to plan, film, and edit the videos.” • “Some of these include technical problems, learning video editing, and working within the limitations of equipment.”
The connection of prior knowledge to vlogging goals	<p>Some students mentioned a variety of skills and techniques (IT skills, public speaking, and storytelling) they had learned in</p>	<ul style="list-style-type: none"> • “I applied what I knew about storytelling in making our video more interesting. I also have basic editing skills from the previous course that helped polish the final product.” • “Technology class knowledge aids in managing technical aspects concerning the production of the

	previous courses, which supported them in completing such a video project.	video, making the final product polished and professional.” <ul style="list-style-type: none"> • “I applied my public speaking skills to interact with foreigners.” • “We just used some interesting vocabs and phrases in the book for our interview content.”
The emotional engagement of making digital videos	Most students stated that the experience of making videos was curious and exciting.	<ul style="list-style-type: none"> • “I am so happy and excited when making videos. The development of ideas into actual visual products is quite thrilling, and curiosity may be evoked by experimenting with different editing techniques. • “I was curious about the reaction and response of interviewees to our questions. Furthermore, meeting and talking to foreigners was an exciting experience.” • “Honestly, creating videos makes me feel excited and curious.” • “Going to many tourist destinations and interacting with foreign tourists is the most interesting thing. Choosing a video editing style is also something that interests me.” • “I think the content of a video can make me feel more curious.

Discussions

The students used a strategic approach to group work by allocating the assignments among the group members. By developing the screenplay, directing the video, and editing it, each team member added to the creation of the movie. This encouraged cooperation and teamwork among the group members. Students in the group communicated well with one another, and improving results was their shared objective. This study supports the assertion of Ryan (2013) that students who create films and participate in peer discussions in class love working with others and have a strong appreciation for their roles and responsibilities. Also, the findings aligned with the reports from Engin (2014), Naqvi (2015), and Almutairi (2018) regarding the positive impacts of SGD V on students' learning by boosting their motivation, collaboration, and creativity. Furthermore, the SGD V project positively impacted the students' self-study when they were triggered to be actively involved in their learning instead of just learning theoretical knowledge, which aligned with the study of Thomas et al. (1999) and Tongsakul et al. (2011).

However, the challenges that students had to deal with when conducting the project were less focused on other studies. The students who worked on the films faced several obstacles as they tried to develop and broaden their project. They lacked the necessary knowledge and expertise when they started making the movies. Students must have a wide range of project management abilities to create digital videos, including organizing, planning, and structuring their content-based message. The study's participants demonstrated the ability to organize and evaluate their work. Nonetheless, the inexperienced students found student-generated digital videos

challenging, and their responses indicated that they considered the usage of cameras and editing software to be intricate, but the students in this research appeared to have solved this problem by working with classmates and asking instructors for comments.

Conclusion

Summary of the major findings

The implementation of student-generated digital videos attracts some of the positive and constructive feedback of the participants. There is no denying that such a project offers a special chance for the students to engage in their learning process and actively undergo unique experiences. First, for some students, this is their first time having such a new method of assessment in class, which incentivizes creativity and self-organization; before that, it is mainly PowerPoint presentations and essay writing. Second, this kind of project provides an authentic learning environment for the students to develop some important social skills, such as problem-solving, communication, and leadership skills, regardless of their roles and responsibilities in the group. Third, the first and foremost experience that the students have with some of the digital applications for making and editing videos is taken into consideration. This, however, creates both excitement and fear at the same time. The students are excited to produce their own videos for the first time but afraid of using some technological tools, especially low-tech ones, as it would be more time-consuming. In the end, the fact that the students overcome these obstacles to hand in a final version of their videos is a major success for them, promoting the student's cognitive and emotional engagement.

Pedagogical implications

All things considered, English-majored students find student-generated digital videos to be a helpful tool for completing projects related to English speaking and listening skills, but they should be used sensibly and in combination with other language learning materials. Teachers and lecturers should instruct students on how to make a video effectively and responsibly. This can include teaching them how to use some digital applications to produce and edit the content of videos and the importance of using them as a supplement to their language learning. Teachers and instructors should provide alternative resources and websites for students to have a reference on how to film and edit a short video. Finally, teachers should give clear rubrics for marking the production clip and the final deadlines for each stage.

Limitations of the research

It cannot be disputed that this study is still subject to some limitations. First off, because only three tertiary students in one class coming from the Faculty of Foreign Languages at Saigon University participated in the semi-structured interviews, the research may not accurately reflect the in-depth perspectives of all English majors in Ho Chi Minh City in particular and in Vietnam in general. As a result, less data is gathered. Consequently, in order to provide more thorough and persuasive findings for future studies, a greater variety of interview sample sizes must be used. Convenient sampling was also used to choose the target subjects, which reduced the study's generalizability.

Recommendations for further research

Notwithstanding the study's limitations, the researchers hope that the usage of student-generated digital videos in Vietnamese academic settings will be extensively examined in the research because it seems like a fresh and understudied field. Future research should include other Vietnamese universities and educational institutions and extend the participants to non-English majors. This increases the chance for the experts to consider student-generated digital videos' assessment of representativeness and educational concepts.

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An Investigation into Students' Perceptions of Using Padlet as a Discussion Board at Saigon University

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ABSTRACT

Keywords: Padlet, a discussion board, students' perceptions.

Padlet.com is a cutting-edge platform enabling learners to collaborate effortlessly online by posting their work on a digital wall. Integrating Padlet into language teaching is thought to enhance remote learning, collaboration, and access to diverse language learning resources, making the learning experience more accessible, flexible, and interactive. The study aims to explore the perceptions of Saigon University students regarding using Padlet as a discussion board in their learning process. Both quantitative and qualitative methods were used to gather data through questionnaires and reflections. According to the results, the students acknowledge that the integration of Padlet enables them to create their responses in different forms, identify spelling mistakes and grammatical errors, as well as give peer assessments and comments. Additionally, most students agree that Padlet creates an enjoyable environment for productive and collaborative practice, which encourages active participation and engagement in their language learning classes. On the other hand, they admit that the greatest limitation is the stability of the Internet connection during the learning practice using Padlet.

Introduction

Technology integration into education has significantly transformed how students and teachers interact. Interactive technologies can positively enhance students' interactivity and learning engagement (Getenet & Tualalelei, 2023; Phan, 2023; Pham, 2022). According to Dewitt et al. (2014), higher students should focus on developing skills that go beyond simply memorizing academic information. These skills include learning new things, understanding them deeply, using them effectively, and even contributing to new knowledge. Henceforth, one such tool gaining prominence is Padlet, a digital wall or bulletin board that facilitates collaborative platforms and asynchronous communication in EFL classrooms. Padlet allows students to share ideas, participate in discussions, and collaborate on projects and other meaningful learning

opportunities more effectively than traditional methods (Nadeem, 2019). Using Padlet as an English learning and teaching tool in academic courses can enhance a more positive and engaging experience, encouraging students to interact and collaborate with their classmates, leading to a better learning environment. This active participation can also create “a positive emotional and cognitive environment” which then can improve students’ motivation and enthusiasm for learning (Dewitt et al., 2014). While most previous research has focused on the connection between student engagement in class and their academic performance, this study seeks to explore another aspect of using Padlet as a discussion board in the context of Vietnamese tertiary education.

Literature review

Padlet

Padlet is one of the tools that allow users to create and design content on a virtual bulletin board, with other useful functions such as inserting pictures, short videos, links or documents. This tool could assist students in making presentations in a colorful layout by organizing photos and visual ideas in a collaborative structure. In addition, Padlet is effective when it comes to the classroom participation of the students and assessment tasks for the teachers. Thanks to the feature of peer feedback and comments, increased interaction, fostered creativity and promoted collaboration are the indispensable benefits of using Padlet (Beltran-Martin, 2019; Qurbani, 2022; Suryani & Daulay, 2022). Also, Padlet allows users to share links, exchange files, and documents, and create slideshows, therefore boosting the learners’ creativity through a virtual collaborative platform.

According to Kimura (2018) and Rashid et al. (2019), Padlet is the medium that links the use of technological devices with the students' learning experiences, thereby being considered one of the valuable educational applications. Furthermore, it is not just the students who experience the compelling incentives of Padlet; the teachers, at the same time, can take advantage of Padlet to transform traditional teaching methods into more innovative ones. As a whole, the implementation of Padlet as educational assistance serves as a crucial educational resource thanks to the promotion of creativity and collaboration it brings (Waltemeyer et al., 2021).

Some previous studies

The implication of Padlet in learning process has been studied in much different research both in Vietnam and around the globe. One of the benefits of using technology in language teaching is enhancing creativity and motivation. In fact, certain studies conducted in the Vietnamese context have found that the application of Padlet in writing and speaking classrooms could positively impact students' attitudes toward learning, self-esteem, and overall success. Additionally, it has increased student motivation and provided teachers with opportunities to offer new and engaging learning experiences (Do et al., 2023; Ta et al., 2023; Thai & Nguyen, 2022).

One exploratory case study conducted by Norziha et al. (2020) found that active learning with Padlet significantly improved student engagement in classroom activities. By employing a

quantitative approach, 39 postgraduates taking a Business Statistics for Data Science course were given a questionnaire. Factors like motivation, active learning, teamwork, ease of use and satisfaction were measured to gauge their engagement.

Similarly, another quasi-experimental study involving 60 first-year secondary school students in Saudi Arabia was divided into two groups in order to investigate how electronic walls (like Padlet) could help students learn reading and writing skills in English classes. Padlet was applied in the learning process of one group, whereas the traditional method was conducted with the other. The researcher collected data from participants via their pre and post-tests in reading and writing skills. Positive results from the t-tests of students using Padlet in the finding indicated that they had improvements in reading and writing skills and eagerly engaged in their learning practice with an electronic wall (Al-Zahrani, 2021).

Research by Kharis et al. (2020) investigated learners' perspectives on applying Internet technology in their learning process; specifically, the use of Padlet as an assistant tool for improving their German writing proficiency. The study employed open-ended and closed questionnaires with a population of 21 participants, comprising 2 males and 19 females, aged 19-22. The findings revealed that most participants adored the implementation of technology in classrooms. However, they were hesitant to utilize Padlet as a micro-blogging platform for German writing skills due to limitations like the poor internet connection and the incompatibility of some mobile devices with Padlet.

Padlet is considered a useful tool for students in different learning aspects, for example, constructing knowledge, organizing ideas, and exchanging information. It also provides users with a flexible and engaging learning environment, stimulating their active learning mode. Indeed, it is proved that Padlet promotes a sense of community and collaboration among learners, which allows them to raise their voices freely and exchange feedback with one another (Amer et al., 2024). In addition, Padlet also assists educators in capturing students' interest and engaging them in discussion activities (Amer et al., 2024). Overall, Padlet's features boost students' social interaction and obtain instant feedback during class activities, particularly in courses involving group discussions or assessments.

Connectivism Theory

The notion of "connectivism" stated by Siemens (2005) was considered as a new learning model suitable for modern society. Thanks to technology, learners can obtain various sources of information from the Internet and then transfer them into their knowledge storage; thereby, it is defined that knowledge does not only exist in an individual but also among other learners in media platforms. In other words, people can obtain plenty of information from both the web and each other (Dziubaniuk et al., 2023; Alam, 2023). In addition, the theory of "connectivism" assisted learners in studying and acquiring knowledge more independently, which stimulated their autonomy (Mampota et al., 2023). Due to the nature of the connectivism theory, a technological platform like Padlet can help teachers limit some restrictions of traditional online learning environments (Alam, 2023). This theory is particularly relevant for the study to investigate how Padlet influences changes in modern interactive learning in the digital era.

Research Questions

To fulfill the purpose of the study, the mixed methods were seeking to answer the following research questions:

1. In what aspects does Padlet assist learners in their learning process?
2. How do students think about the use of Padlet as a discussion board?

Methods

Pedagogical Setting & Participants

The participants of the quantitative study were 150 students (aged 18 to 21 years old) studying General English courses level 1 and 2 at Saigon University, all of whom majored in information technology, education, business administration, and accounting. Then, the researchers randomly chose 43 students from those populations to get the qualitative data. The group of students for reflective tasks was selected from one class due to the convenience of the time schedule used to get the data. Among them, 81.4% were female 18.6% were male; 39.5% were 19, and 60.5% were 18. Prior to their inclusion in this study, we diligently acquired their informed consent, ensuring their voluntary participation in the research.

Design of the Study

In line with the research's objective and research questions, a mixed-method approach with an explanatory sequential design was applied to the study. There was a 5-point Likert scale questionnaire of 150 students among 4 classes. The questionnaire contained three parts. The first part asked for some personal information about students, such as age, gender, and major. The following sections were designed to answer the research questions using multiple-choice questions with a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The survey items to answer the first research question were developed from the process of participation in peer learning, thereby showcasing the importance of the discussion board (S.Kanchana & Cherukuri, 2024), whereas the last part of the survey to discover the perceptions of learners on Padlet application was adapted from study findings of Qurbani et al. (2022) and Karki (2024). Students' commentaries and opinions collected from the research were selected and worded into the questionnaire's items for further confirmation.

Although several reveal the benefits and merits of Padlet in teaching and learning, the limitations of this tool in language practice were not fully explored in the Vietnamese context, specifically in a state university. Therefore, to obtain more opinions of learners on restrictions that learners had faced during discussion activity, the authors employed a self-reflection task among participants (43 students in one class) to assess deeper insights into both the positive effects and limitations of this platform. Qualitative data collection types have their own advantages and limitations (Creswell & Creswell, 2018). Collecting reflections is similar to giving structured interviews in written form, which assists researchers in saving time in transcribing voices and conducting a number of face-to-face interviews, but it still works to obtain in-depth data related to feelings, attitudes, and opinions of the research population. Thus, due to the time shortage and the research's small scale, the reflective tasks that the authors were

more likely to employ in this study might be the most suitable.

Data collection & Analysis

Over the 10-week course, the students engaged with Padlet as a medium for discussion in their English learning and practice. In the first phase of the study, participants were asked to respond to questions regarding the stages and their perceptions of using Padlet as a discussion medium through the questionnaire. Continuously, reflective tasks were conducted in the second phase of the study after collecting the figures from the survey so that the researchers could draw out other information that was different from the listed items.

In order to enhance the validity of the study, the questions were initially translated into Vietnamese to ensure that all the participants completely comprehended the content. It was also piloted to two English lecturers for error checking in terms of spelling, meaning, and translation. In terms of the reflections, all the participants' answers were carried out in Vietnamese to ensure that they could express themselves comfortably without language constraints. To ensure the validity and reliability of the qualitative data analysis, the English version of the findings was sent to three members of the research team to peer review and crosscheck.

For the quantitative part, SPSS version 26 was used to gather and analyze data of 150 participants from the questionnaire.

For the qualitative part, the data was analyzed inductively (Corbin & Strauss, 2014), through a recursive process of open coding, axial coding, and selective coding. The reflections from 43 participants fully demonstrated learners' perceptions towards the use of Padlet as a discussion board, particularly into two main themes: 1) the positive effects of Padlet, and 2) the potential restrictions posed by Padlet in learning practice.

Results/Findings and Discussion

Learners' perceptions of Padlet as a discussion tool are presented and interpreted in terms of the questionnaire and reflection results, focusing on the aspects of Padlet's useful in the learning process, the benefits as well as the limitations of this tool in language learning.

The aspects of Padlet that are useful for learners in their learning process

The participants' responses from the questionnaire revealed that students perceive Padlet as beneficial in the following aspects of the learning process.

Table 1.

Learners' answers to the questionnaires

No.	Statement (N=150; Mean = 4.12)	Mean (4.12)	Std. Deviation
1	Producing and uploading products	4.23	0.77
2	Identifying and correcting spelling and grammar mistakes	4.06	0.94
3	Exchanging ideas	4.11	0.89
4	Providing references	4.28	0.72
5	Reviewing and practicing	3.96	1.04

Table 1 presents the learners' perceptions on how beneficial the implication of Padlet is in the aspects of the learning process. Overall, learner users found Padlet helpful for them in every phase of their learning, with mean $M=4.12$ more than value 4 and closer to value 5 (strongly agree), which interpreted that users tended to appreciate the valuable assistance of Padlet in the learning process. As can be observed, the student users recognized that it was very useful to apply Padlet in the first stage of the learning process - producing and uploading products ($M=4.23$) as well as providing references ($M=4.28$). The participants said they found it helpful in other aspects, such as exchanging ideas ($M=4.11$), identifying and correcting spelling and grammar mistakes ($M=4.06$), and reviewing and practicing ($M=3.96$).

The results to answer the first research question showed the positive perceptions of participants in the Padlet application as a discussion tool in the classroom. During the discussion, the products of group members would be expressed in written forms on an online platform so the discussion products can be utilized and interchangeable with the writing process. Thereby, the findings were in line with previous studies (Fadillah, 2021; Qurbani et al., 2022), followed by two main theoretical frameworks – the assisted stages in the writing process (Richard & Renandya, 2002) and the importance of discussion board (S.Kanchana & Cherukuri, 2024).

Perceptions of students regarding the benefits and limitations of Padlet throughout their learning practice

The quantitative and qualitative methods in collecting data were synthesized in order to answer the research question, "How do students think about the use of Padlet as a discussion board?"

The results collected from the questionnaire

The questionnaire was used to gather quantitative information from 150 students who demonstrated their perceptions of the Padlet application during discussion activities.

Table 2.

Learners' answers regarding the benefits of the implication of Padlet

No.	Statement (N=150; Mean = 4.18)	Mean (4.18)	Std. Deviation
1	I can easily access the Padlet (with mobile phones, laptops, ...).	4.37	0.63
2	The theme of Padlet is user-friendly (clear, simple, eye-catching...).	4.22	0.78
3	I can easily apply a variety of equipment in Padlet (text site, pictures, audio, comments...).	4.14	0.86
4	I think using Padlet as a discussion board is more interesting than the traditional way.	4.09	0.91
5	I think using Padlet as a discussion board is more convenient than the traditional way (it saves paper and improves typing skills).	4.30	0.70
6	I feel comfortable discussing and sharing ideas on Padlet.	3.89	1.11
7	I feel engaged in using Padlet in group discussions.	4.03	0.97
8	I can peer-check the products with other students.	4.11	0.89
9	I can have more useful references from other students' products.	4.29	0.71
10	I can receive detailed feedback and comments from the teachers.	4.36	0.64

Table 2 illustrates the opinions of learners on the benefits of the implication of Padlet as a discussion board. The overall figure from the data expressed a positive trend in implementing Padlet in discussion activities with mean $M=4.18$ closer to value 5 (strongly agree). Students' feedback showed their very high agreement with the beneficial assistance of Padlet during the learning process. Specifically, they stated that it is easy for them to access Padlet ($M=4.37$) and they could obtain useful feedback and comments from teachers ($M=4.36$). Learners also highly evaluated the merits of Padlet on its user-friendly theme, helpfulness, and convenience in usage compared to the traditional discussion way, which was shown in the high-level mean ($M>4.0$) of the results' figures. Two considerable items related to learners' feelings about using Padlet as an online discussion tool also showed that they were eager and motivated to share ideas and work with collaborative tasks in Padlet ($M=3.89$ and 4.03). In addition, another benefit of Padlet that users could utilize was having more informative references from peers ($M=4.29$).

Table 3.

Learners' answers regarding the limitations of the implication of Padlet

No.	Statement (N=150; Mean = 3.02)	Mean (3.02)	Std. Deviation
1	No smartphones with Internet connection	2.39	2.61
2	Internet connection instability	3.89	1.11
3	Tiredness of using technology in discussion	2.75	2.25
4	Limitations in design themes with cell phones	3.08	1.92

There was a clear contradiction in the perceptions of learners on negative aspects of applying Padlet in their learning practice, particularly in the first negative comment with the others. Although the overall mean $M=3.02$ was more than value 3 and closer to value 4 (agree) in the data expressed a moderate level of agreement, the participants disagreed with the statements that they did not possess smartphones with Internet connection as well as it was tired of using Padlet in discussion with $M= 2.39$ and 2.75 in respectively. That means the implementation of Padlet as a discussion medium was not a problem for them.

However, the greatest constraint of applying technology in their learning was the instability of Internet connection with mean $M=3.89$. This figure was consistent with the results of the previous study, which indicated the same problems of technology implementation in different contexts (Qurbani et al., 2022; Karki, 2024). Additionally, more than half of learners agreed that it is difficult for them to manipulate more complicated designs or themes with a smartphone. In other words, this platform's usage is limited when accessed through cell phones ($M=3.08$).

The results collected from the reflections

Students' perceptions obtained from the reflection sessions were synthesized to support the findings for the second research question. Therefore, the main themes were identified into sub-themes: the benefits: 1) ease of use and efficiency, 2) Interest and engagement, and 3) collaboration and references, and the limitations: 4) technology-related issues, 5) device limitations, and 6) adaptation to technology.

Table 4.

A thematic analysis illustrating the themes and key contents of the reflections

Sub-theme	Description	Students' Commentaries
Ease of Use and Efficiency	Almost all students agreed that Padlet is a user-friendly and effective tool.	<ul style="list-style-type: none"> • “Padlet is an easy-to-use tool with a user-friendly format. I can easily access and upload information on the Padlet.” (S22) • “The theme is simple and clear. I find it easy and effective to use even in the first try.” (S9) • “Using Padlet in discussion activities can save materials such as papers or pen ink. So it is more convenient and cost-effective.” (S14) • “Working on Padlet helps us to save time and effort in outlining ideas and designing patterns.” (S38)
Interest and Engagement	Most students found it fun and exciting to use Padlet in discussion activity.	<ul style="list-style-type: none"> • “Padlet is an interesting tool for learning which I can manipulate different types of forms like texts, pictures, slides, and recording.” (S42) • “I feel free to express my ideas and create new things with Padlet.” (S10) • “I find it interesting for me to share opinions on Padlet by creating a lot of pictures, songs, animated icons...My works in Padlet is more appealing and meaningful.” (S26) • “Applying technology-based group work activities motivates me a lot in learning process.” (S24)
Collaboration and References	80% of participants mentioned the benefits of Padlet in the learning process: improving group work, gaining further revision, having feedback, and references.	<ul style="list-style-type: none"> • “Padlet encourages us to work in groups and collaborate.” (S18) • “My teacher can give feedback and comments for further improvements, and we can learn a lot from it later.” (S33) • “I think I can learn from mistakes that my friends and I made and then the corrections made by teachers.” (S35) • “After discussion, we can get a lot of informative and colorful posts from peers.” (S36) • “We can have a lot of references and samples from friends for further review and practice.” (S38) • “We can show our ideas on the slides, and it’s really wonderful to discuss others’ posts.” (S41)
Internet Connectivity Issues	Some students are having technical issues while accessing Padlet	<ul style="list-style-type: none"> • “Most of us have a smartphone with Internet connection; however, sometimes interruptions occur causing inconvenience during discussion.” (S17) • “In some areas of our school, some of us can’t access the Internet and somehow it affects our work.” (S41) • “It’s a little bit annoying if the Internet interruption occurs and we haven’t finished our tasks.” (S1) • “Sometimes, I lost my posts due to technical problems or Internet low connection.” (S5)
Device limitations	Some students stated the inconvenience of the tool while using it in posting tasks.	<ul style="list-style-type: none"> • “In the classroom, we usually use Padlet on smartphones. I think it is useful for uploading information with texts, images, and audio. However, it is hard for us to do something more than that. I mean

		<p>we need a laptop to design a better slide to attract the audience.” (S43)</p> <ul style="list-style-type: none"> • “Padlet is easy to use; however, if our group wants to design more colorful images, it’s hard for us to do on smartphones.” (S42) • “It’s hard for me to look for my previous posts on cell phones, and sometimes I posted my task in the wrong section.” (S14)
Adaptation to technology	A few students mentioned certain issues with the Padlet application, but basically, it's not a problem.	<ul style="list-style-type: none"> • “I suppose some members in my group can be distracted by other activities when they access the Internet in learning. Therefore, we will ask for teacher’s intervention if he/she continues to play games during the discussion.” (S1) • “I don’t think it’s tiring to use Padlet in discussions and learning because recently, the application of technology has become the norm.” (S20) • “One of member in my group don’t have a smartphone, but it’s OK because we work in group. He can give his ideas, and I will manipulate on my cellphone.” (S38)

The quantitative and qualitative findings indicated that the academics’ beliefs, shaped by previous research, included both positive and negative perspectives. These insights contributed to the existing literature on learners’ experiences with Padlet as a discussion tool in educational settings.

For the first main theme on the benefits of Padlet implication

Padlet was favored by students as a discussion tool in classroom learning, as evidenced by their questionnaires and reflections. The reflective tasks revealed that Padlet was easy to access and effectively utilized during discussions in the learning process. Its novelty, user-friendliness, appealing design, and convenience were key factors that engaged students in collaborative practice. Most of the students agreed that Padlet is beneficial and easy to use. In addition, several participants found it more interesting and motivating to use a technology-based tool - Padlet, in collaborative practice, which boosted their motivation and created a friendly learning environment.

“Working in group on Padlet is an enjoyable experience, allowing us to freely express our ideas and creativity.” (S18)

“I find it more exciting and enjoyable to share ideas on Padlet, as we can use various formats like pictures, songs, and animated icons to convey our thoughts.” (S26)

Several ideas from participants categorized into sub-theme Interest and Engagement of the reflections (also revealed the same results with a high level of agreement in the questionnaire) showed that they found it more comfortable and engaged in classroom discussion via Padlet due to the familiarity with text typing and technology-based stimulation.

“I think it’s more fun and interesting to use Padlet in group discussion. I feel more confident discussing and sharing my ideas on Padlet.”(S24)

The result is different from the sharing collected from Qurbani et al. (2022), which indicated

that students lacked the confidence to write opinions on Padlet. However, several studies revealed findings to support the Padlet implementation in language learning practice since it provides a friendly and enjoyable learning environment for learners to interact and practice (Al Momani et al., 2022; Karki, 2024).

The data from mixed methods also aligned with previous studies about the impact of Padlet on collaboration and references (Do et al., 2023; Satra, 2021; Thai & Nguyen, 2022). Padlet is considered an effective tool for learners to obtain a large number of learning sources from peers' products and teachers' feedback. 85% of students approved that they could have plenty of useful samples and learning materials for later review and practice after a discussion session. Therefore, the finding is consistent with previous research to show that Padlet is a learning support tool to foster learners in the learning process through peer assessment and collaboration tasks (Dewitt et al., 2015; Mulyadi et al., 2021). Thanks to Padlet, learners can learn from mistakes, self-reflection, peers, and teachers' comments, which means they can get several ways to learn and practice. Thus, the matter is that in order to have a useful and conventional source of information, teachers play a vital role in giving instruction, guidance, and feedback (Pham & Nguyen, 2021). This issue, however, is not mentioned and deeply explored in this research, which can be considered its possible limitation.

For the second main theme on limitations of Padlet implication

Regarding the restrictions of Padlet application in the learning process, previous research also noted the same concerns, mainly on technology-related issues and device limitations themselves. The instability of the Internet connection was the biggest challenge for learners to apply Padlet in the classroom (Qurbani et al., 2022; Jong & Tan, 2021). Basically, it can be a common problem of technology-based learning practice, so good preparation beforehand or a contingency plan needs to be taken into consideration.

In the same vein of device limitations itself, many opinions have indicated the limited usage of Padlet through cellphones. It is difficult for students to conduct a more complicated task with Padlet on their smartphones. Hence, those groups desired a professional or eye-catching appearance for their products, they had to work on computers to thoroughly design the themes and upload slides.

On the other hand, the study also uncovered two less-mentioned negative thoughts that were not deeply focused on in previous studies. The first one was "the difficulty in searching old posts" for revision and later review. *"It's hard for me to look for my previous posts on cell phones, and sometimes I posted my task in the wrong section"* (S8). The limitation once again related to the device design format of Padlet, so it took time to search and find previous posts if there were plenty of works produced. Second of all, there were some ideas to say about "distraction in technology-based learning". *"I see some of my friends search the Internet or play games when they can use smartphones in class activities."* (S1). Actually, this can be seen as an apparent drawback of applying technological platforms in the teaching and learning process. For those restrictions on Padlet use in discussion practice, the teachers need to be in charge of a facilitator and moderator to restrict the trouble and ensure learning purpose (Karki, 2024; Suryani & Daulay, 2022).

Conclusion

Summary of the major findings

The findings show that the students acknowledged the ability to make replies in many formats, including text sizes, sounds, and photos, with the use of Padlet. What is more, this useful kind of platform could recognize spelling and grammar mistakes and provide peer assessments and comments. Furthermore, the majority of students concur that using Padlet fosters a positive, cooperative learning atmosphere that promotes involvement and engagement in their language learning courses. However, they acknowledge that the biggest impediment to the Padlet learning process is the Internet signal and connectivity, which could negatively affect the learning process.

Limitations of the research

There is no denying that there are still certain restrictions on this study. Firstly, the research may not fully represent the views of all EFL students in Vietnam, as only 150 non-English majors from Saigon University took part in it. In order to get more comprehensive and persuasive findings, future studies need to employ a wider variety of sample sizes. Furthermore, the study's generalizability was diminished by the use of convenient sampling in the selection of the target participants.

Recommendations for further research

Despite the limitations of this study, the researchers anticipate that Padlet usage in Vietnamese academic environments will be thoroughly investigated in future studies since it appears to be a novel and understudied area. Beyond Saigon University in Ho Chi Minh City, more Vietnamese universities and educational establishments ought to be included in future studies. This gives the experts more opportunity to consider Padlet in terms of representativeness and pedagogical ideas. Apart from Padlet, it is advisable to look into additional websites and tools that are especially used in higher education for non-English majors.

Risk mitigation

When this project was being carried out, a number of unfavorable things would occur. Therefore, in order to be well-prepared for the answers, it is crucial that we foresee the dangers or difficulties. This section lists all potential issues, explains them in great depth, and offers solutions.

First off, not all of the students' opinions and attitudes are reflected in the poll, which means the questionnaire is not well-structured. Hence, the gathered data could not be sufficiently trustworthy. To be honest, it is a major concern that might lead to further issues with the project as a whole. But if this issue is taken into account in advance, everything will run according to plan. Before allowing students to respond to any of the questionnaire's questions, the writers must debate and carefully go over each one. Furthermore, it is imperative to incorporate the essential concepts and attributes of Padlet into the survey questions. Furthermore, it is during this crucial phase that the pedagogical factors must be taken into account. In order to ensure the readability and consistency of the questionnaire items, the surveying procedure comprises both the piloting and SPSS phases.

Furthermore, due to our lack of expertise in both qualitative and quantitative methodologies, it is not practical for the researchers to carry out this study using a mix of both approaches. Conducting research and data analysis does take a lot of time, and due to the high computational demands of quantitative approaches, all writers must showcase extreme diligence and precision. It is essential to analyze and summarize all of the data more than twice in order to guarantee precise modifications.

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Empirical Research Trends in the Use of AI Chatbots in EFL Teaching and Learning in Vietnam: A Systematic Review

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ABSTRACT

Keywords: Empirical research trends, AI Chatbots in EFL classrooms, Vietnam, systematic review

Since the creation of ELIZA in 1966 and the groundbreaking launch of ChatGPT in 2022, AI chatbots have advanced and found applications across various fields, including English language education, prompting numerous studies. This paper presents the first systematic review of empirical studies concerning AI chatbots in EFL teaching and learning within Vietnam, adopting the PRISMA flowchart model (Moher et al., 2009) for article selection, and thematic analysis for data analysis. Findings reveal that, although limited, the number of empirical studies on AI chatbots in English education in Vietnam has been growing, with around a quarter published in Scopus-indexed journals or book series. Research settings varied, with Ho Chi Minh City being the most common location. ChatGPT was the dominant AI chatbot, and AI chatbots' influence on students' English learning was the most explored topic. Undergraduates and university lecturers were the primary participants, and the mixed-method approach, particularly using questionnaires with or without interviews, was the most commonly employed methodology.

Introduction

Artificial intelligence (AI) and its application have been a popular topic of discussion across a range of disciplines including education. Studies have demonstrated that AI and AI chatbots in particular have become a powerful asset in the realm of English language instruction and acquisition, offering a variety of benefits to both students and educators. A meta-analysis indicated that utilizing AI chatbots can facilitate improved educational results by offering interactive and personalized learning experiences (Wu & Yu, 2023). The personalized nature of chatbot interactions allows for tailored guidance and support, which is essential for language acquisition (Baskara, 2023). For instance, the incorporation of chatbots in education has yielded

encouraging results in improving students' English-speaking skills, self-assurance, participation, and motivation (Du & Daniel, 2024). In line with this, students using AI chatbots demonstrated significantly improved speaking skills compared to those who did not (Kemalbekova et al., 2024). This is consistent with the findings of Han's research revealing that AI chatbots not only enhance speaking competence but also positively influence students' emotional responses to learning (Han, 2020). Liu et al. (2024) also confirmed that engaging with chatbots can cultivate a sense of flow and heighten students' engagement with reading activities.

Several systematic reviews of research on AI chatbots in the educational sector, particularly English language teaching and acquisition, have been conducted. One example is the research with the inclusion of 53 articles implemented by Okonkwo and Ade-Ibijola (2021) with the aim to construct a comprehensive understanding of chatbots in education, covering their applications, advantages, drawbacks and potential directions for future research on integrating chatbot technology into educational settings. A considerable number of other papers also centered on the topic of conversational AI's impact on education (Chen et al., 2020; Crompton & Burke, 2023; Deng & Yu, 2023; Gökçearsan et al., 2024; Krstić et al., 2022; Pérez et al., 2020; Tahiru, 2021). Similarly, Huang et al. (2021) analyzed a dataset of 25 articles to investigate the possible benefits of AI chatbots in the area of language education. Concentrating on a different aspect, Ji et al. (2022) reviewed empirical data on human-computer collaboration across 24 studies carried out in language learning environments powered by conversational AI and published between 2015 and 2021. One of the most recent publications examined 32 papers to figure out trends in conversational AI tools for English Language Teaching (ELT) from January 2013 to November 2023, focusing on publication patterns, tool categories, research methodologies, educational results, and the variables that affect their implementation (Lai & Lee, 2024). Although these papers explored numerous studies from various countries, there is a scarcity of reviewed studies conducted in Vietnam. This, therefore, will be the first to concentrate exclusively on research conducted within the country, providing valuable insights into recent publication trends, frequently and scarcely investigated topics, commonly applied research approaches and instruments and typical research participants in empirical research on AI chatbots in English education. The findings will benefit researchers, educators, and other stakeholders working in Vietnam, guiding future studies on the same topic.

Literature review

Artificial intelligence chatbots

Artificial intelligence (AI) chatbots, as described by Haristiani (2019), are AI-powered applications that can engage in textual or vocal interactions with users and have the ability to expand their knowledge. These conversational tools rely on sophisticated AI technologies, including large language models, natural language processing, and machine learning, to process user input and respond in a conversational style using text or speech (Lai & Lee, 2024). The history of AI chatbots began with the invention of ELIZA by Weizenbaum in 1966, preceding the introduction of PARRY in 1972, Jabberwacky in 1988, ALICE in 1995 while the early twenty-first-century chatbots include SmarterChild, Apple Siri, IBM Watson, Google Assistant,

Microsoft Cortana, which were developed in 2001, 2010, 2011, 2014 respectively (Adamopoulou & Moussiades, 2020). The emergence of ChatGPT in 2022 marked a turning point for AI chatbots, catapulting them to widespread popularity after years of development, and sparking a boom in the creation of new Chatbots, with Gemini, Microsoft Copilot, and Perplexity being notable examples.

Table 1 demonstrates categories of AI chatbots according to knowledge domains, the kinds of service provided, goals, response generation methods, the requirement of human intervention, permissions provided by the development platforms and communication channels. A chatbot is not limited to only one category but can be classified in multiple ways (Adamopoulou & Moussiades, 2020).

Table 1

Classifications of AI chatbots

Knowledge domain	<i>Generic</i> (responding to any query from any subject area)
	<i>Open Domain</i> (functioning across various fields)
	<i>Closed Domain</i> (being limited to a specific area of knowledge)
Service provided	<i>Interpersonal</i> (assisting with reservations in restaurants or airlines, or searching for answers in FAQs, without providing a friendly and conversational experience)
	<i>Intrapersonal</i> (being intimate companions who inhabit the user's realm and comprehend their needs)
	<i>Inter-agent</i> (interacting with other chatbots)
Goals	<i>Informative</i> (sharing data stored in a fixed repository)
	<i>Chat-based/conversational</i> (interacting with the user in a natural, human-like way)
	<i>Task-based</i> (performing various tasks such as booking rooms)
Response generation method	<i>Rule-based</i> (identifying a pattern in the user's input and providing a corresponding pre-determined response)
	<i>Retrieval-based</i> (determining the best response by reviewing the available resources)
	<i>Generative</i> (providing a human-like response that considers both the current and previous inputs)
Human intervention requirement	<i>Human-mediated</i>
	<i>Autonomous</i>
Access permission	<i>Open-source</i>
	<i>Commercial</i>
Communication channel	<i>Text</i>
	<i>Voice</i>
	<i>Image</i>

Note. Adapted from “Chatbots: History, technology, and applications”, by E. Adamopoulou and L. Moussiades, 2020, *Machine Learning with Applications*, 2 (<https://doi.org/10.1016/j.mlwa.2020.100006>). Copyright 2022 by Elsevier Ltd.

English teaching and learning in Vietnam

English is a core component of the Vietnamese national curriculum, and as a mandatory subject, English is integrated into all educational tiers, from primary school to university, equipping students with the linguistic competencies essential for thriving in the interconnected global landscape. The Vietnamese government views English as a vital asset for national development, modernization, and global competition while at the individual level, many Vietnamese people perceive English proficiency as a key to unlocking various opportunities (Hoang, 2020).

In recent years, English teaching and learning in Vietnam has undergone significant transformations, particularly after the COVID-19 pandemic, with increased attention to online learning and technology integration, which reflects a mix of traditional and modern approaches, with efforts to improve English proficiency among Vietnamese students (Dinh et al., 2024; Hoang & Le, 2021). Technology has significantly advanced English language teaching and learning in Vietnam. Universities have adopted e-learning platforms such as LMS and Canvas, offering flexible and efficient learning experiences (Cam, 2021). Blended learning models, combining in-person and online instruction, are being explored to amplify student involvement and achievements (Dinh et al., 2024). English majors have shown positive attitudes toward incorporating AI instruments into their linguistic acquisition endeavors, recognizing their potential to improve learning outcomes (Nguyen, 2024).

AI chatbots in English teaching and learning in Vietnam

AI-powered chatbots are transforming English education in Vietnam, providing students with personalized and engaging learning experiences. AI chatbots are claimed to help improve students' speaking accuracy and fluency as they can speak using better hedging words, grammar structures and lexical resources (Duong & Suppasetseree, 2024). In the same area of speaking, AI chatbots can enhance students' pronunciation skills in areas such as stress, intonation, and vowel sounds (Hoang et al., 2023; Ho et al., 2024). Besides, ChatGPT, a popular AI chatbot, is recognized as a valuable resource for ESP learners, assisting with vocabulary acquisition, translation, grammar checking, and paraphrasing (Ho, 2024). Other studies have found positive influence of AI chatbots on boosting students' learning motivation as the learning stress is lowered, and promoting students' creativity and autonomy (Pham & Le, 2024). These findings corroborate Pham's (2024) research, which identifies ChatGPT as an effective language tool that fosters deeper understanding of the subject matter, elevates student involvement, and reinforces self-assurance, making it well-suited for project development and creative thinking.

Despite the benefits offered by AI chatbots, research in the context of Vietnam has also found their possible adverse effects or challenges. It is feared that AI chatbots may cause students' overreliance on them, diminishing their creative thinking, critical thinking and problem-solving skills (Ngo et al., 2024). The concern about academic integrity is also raised since AI chatbots can be used for plagiarism (Ngo et al., 2024; Nguyen, 2023).

Although AI chatbots present promising advantages for English language teaching, their implementation in Vietnam must be approached with prudence. Further research on this topic is crucial; as a result, an examination of existing studies on the application of AI chatbots in English language education is necessary to guide future research efforts.

Research Questions

This systematic review aims to address the following research questions.

1. What are the publication trends by year, journal/book series, and location in empirical studies examining the use of AI chatbots for English language learning and teaching in Vietnam?
2. What are the topics of empirical studies examining the use of AI chatbots for English language learning and teaching in Vietnam?
3. What kinds of research methods, participants, and data gathering instruments are used in empirical studies examining the use of AI chatbots for English language learning and teaching in Vietnam?

Methods

Design of the Study

This paper utilizes a systematic review method to analyze articles and address its research inquiries. Systematic reviews are rigorous, structured approaches to literature review (Turnbull et al., 2023). They offer comprehensive, unbiased summaries of research, focusing on specific questions. Using explicit search strategies, they include relevant studies from diverse sources, applying predefined criteria for selection to ensure objectivity. Studies are critically evaluated using standardized methods to assess their quality and relevance. Findings are often quantitatively synthesized, such as through meta-analysis, to provide a comprehensive overview. This process yields evidence-based conclusions that can inform decision-making and advance knowledge in various fields.

Table 2

Inclusion and exclusion criteria

	Inclusion	Exclusion
Subject area	AI chatbots in English language education in Vietnam AI in English language education in Vietnam with AI chatbots being specifically mentioned	Not AI chatbots in English language education in Vietnam AI in English language education in Vietnam without AI chatbots being specifically mentioned
Research approach	Empirical research	Conceptual research/literature review
Source	Peer-reviewed journals, conference proceedings, book chapters	Predatory journals, conference proceedings of predatory conferences
Language	English	Other languages
Accessibility	Accessible	Inaccessible

Data collection & analysis

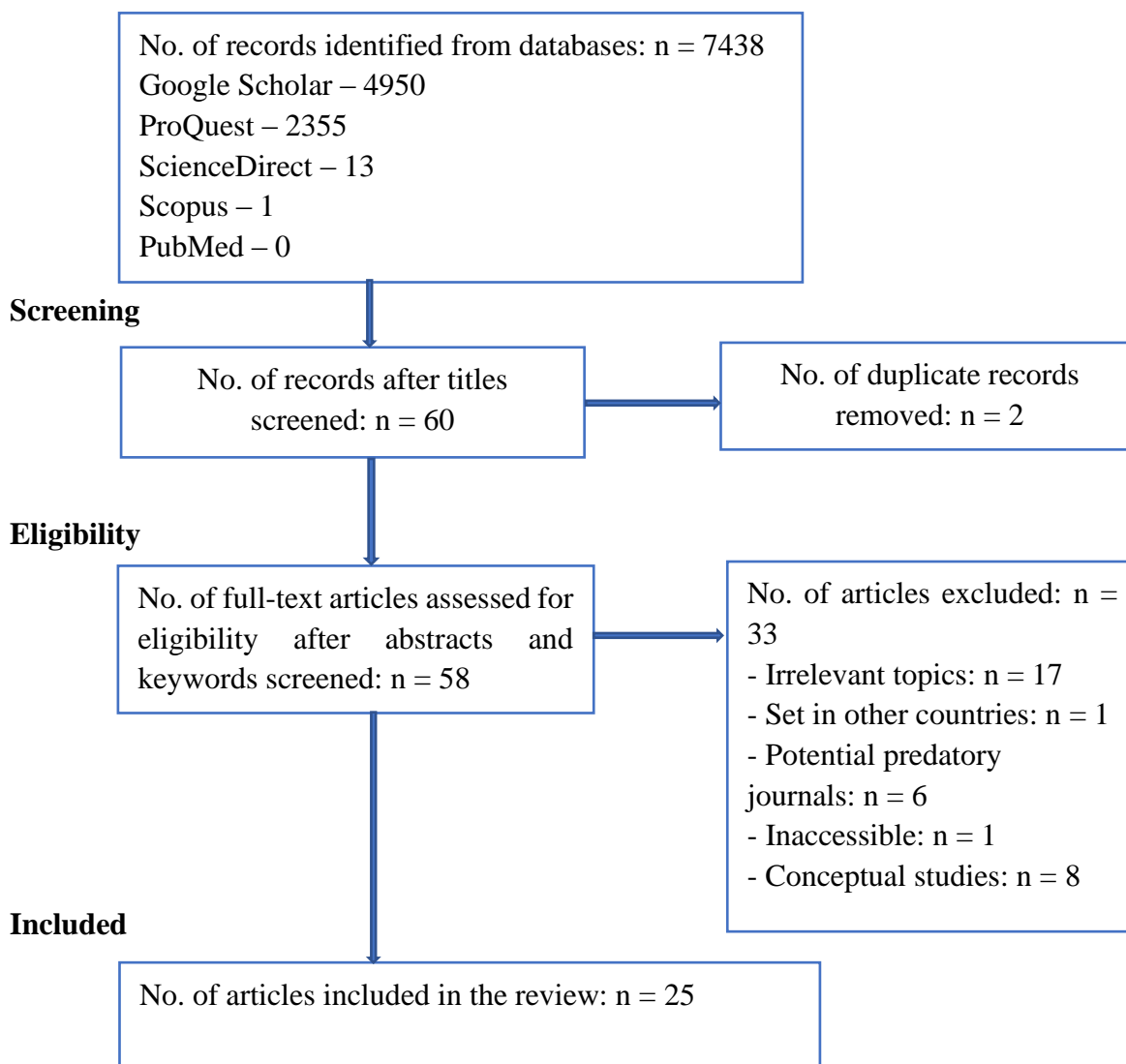
The pertinent literature was sourced from the five different scholarly repositories: Google Scholar, ProQuest, Scopus, ScienceDirect, and PubMed. The search string was formulated using Boolean operators and had the following structure: “AI chatbots” AND “English teaching and learning” AND “Vietnam”. An adaptation of the PRISMA flowchart model (Moher et al., 2009) guided the choice of relevant articles. The process included four steps: identification of potentially relevant articles through database searches, screening of articles’ titles, abstracts, and keywords, assessment of full texts’ eligibility against predetermined inclusion and exclusion criteria, and inclusion of chosen articles for analysis. The initial search results from all five databases totaled 7438 papers.

After that, the titles of the articles were screened using search filters, which were inclusion and exclusion criteria. This created a shortlist of 60 articles. Two duplicate articles were removed before the full texts of 58 articles were reviewed for eligibility, and the final list of articles was determined. The complete article selection procedure is detailed in Figure 1.

Figure 1

Breakdown of article identification and selection

Identification

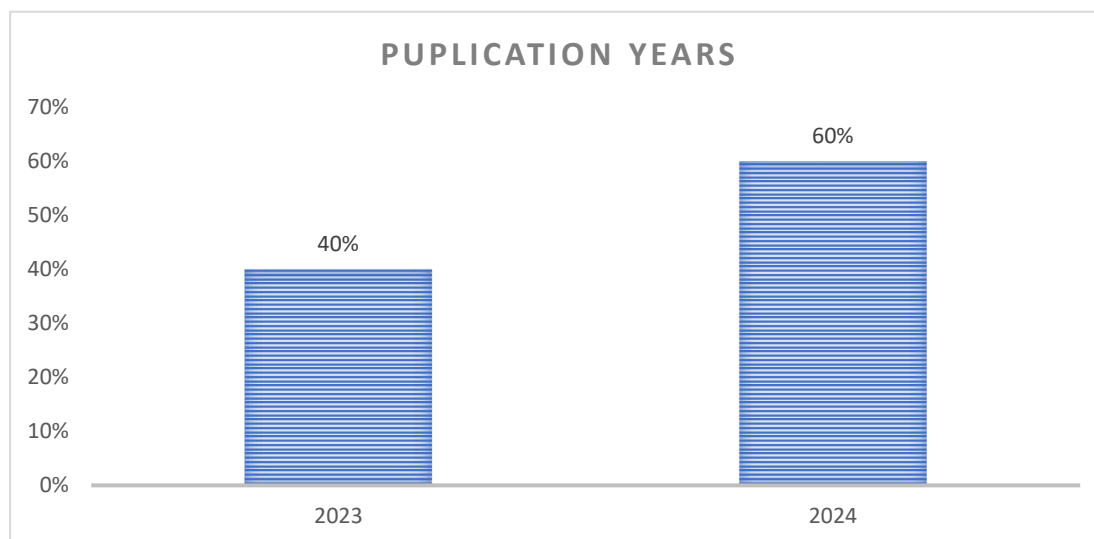


Results/Findings and discussion

Publication trends by year, journal/book series, and location

Figure 2

Publication trends by year

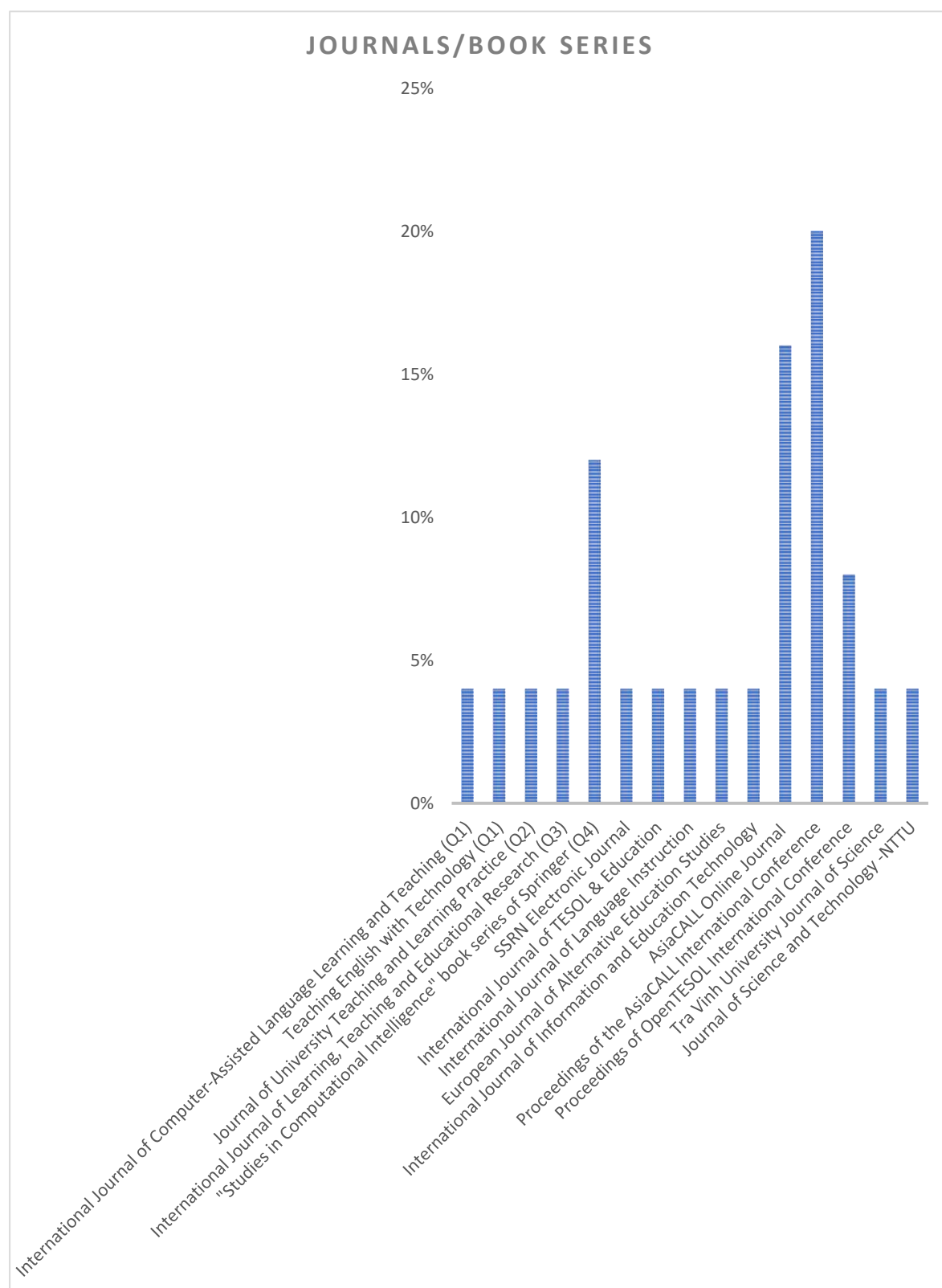


As shown by the chart, no research on AI chatbots in English language education were conducted in Vietnam prior to 2023, which indicates a recent surge in interests in researching the topic. Among 25 studies featured in the current review, 10 (40%) were published in 2023, and the figure rose significantly to 15 (60% of the total) in 2024. The figure may continue to rise towards the end of the year. This is in line with the findings of Lai and Lee (2024) confirming an increase in the number of studies on AI Chatbots in English language teaching and learning and those of Sharadgah and Sa'di (2022) reporting an upward trend in research on AI in English language education and acquisition. A systematic review by Xu et al. (2024) also confirmed this finding. Given the growing popularity of AI chatbots across various aspects of education, this increase is understandable.

As regards journals of publication illustrated by Figure 3, 24% of available articles were published in Scopus-indexed journals or book series, with two Q1 journals, one Q2 journal, one Q3 journal and one Q4 book series. The highest figures were for the Proceedings of AsiaCALL International Conference and AsiaCALL Online Journal. Up to 20% of the reviewed articles were published in the Proceedings of AsiaCALL International Conference while the percentage of articles published in Asia Online Journal was 4% lower. Two articles (8%) were published as part of the Proceedings of OpenTESOL International Conference. SSRN Electronic Journal, International Journal of TESOL & Education, International Journal of Language Instruction, European Journal of Alternative Education Studies, International Journal of Information and Education Technology, Tra Vinh University Journal of Science and Journal of Science and Technology-NTTU each accounted for one article published.

Figure 3

Publication trends by journal/book series

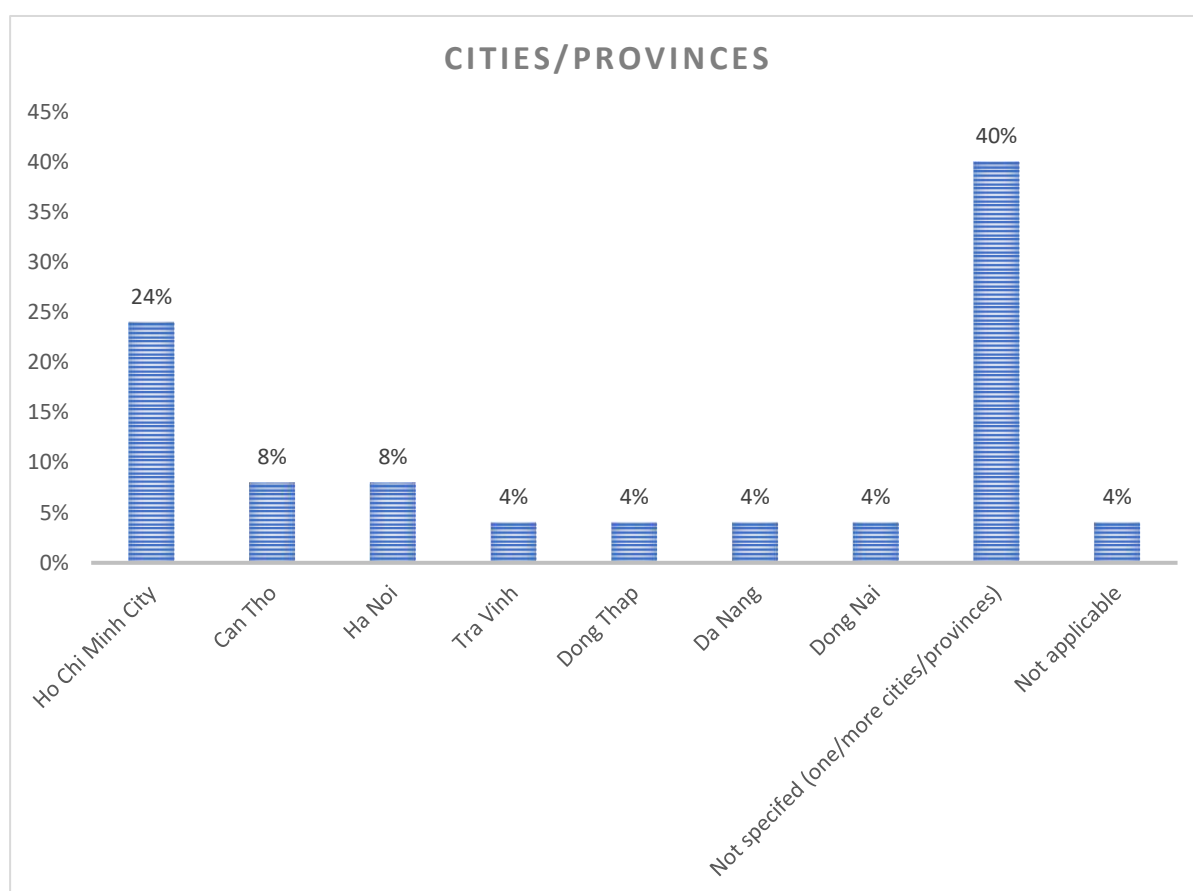


As for locations where the studies were set, the locations of a large proportion of studies (40%)

were not specified. Those studies were conducted with participants from one or more cities or provinces. The most popular location was Ho Chi Minh City, where 24% of studies took place. Can Tho and Ha Noi were considerably less prevalent; each accounted for only 8% of the studies. Tra Vinh, Dong Thap, Da Nang, and Dong Nai were the cities where other studies were conducted, with each study being set in one city/province. One study analyzed AI’s answers to specific prompts, so the element of location is not applicable. These findings highlight a scarcity of research in numerous other cities and provinces across Vietnam.

Figure 4

Publication trends by city/province



Publication trends by topics

Figure 5 shows the dominance of ChatGPT as the center of up to 68% of the reviewed studies. A modest percentage (12%) of the papers focused on AI chatbots or AI in general with specific mentions of AI chatbots. Other AI chatbots were Andy, MissionFluent, Poe, VoiceGPT and ELSA, each of which was examined by one study. This conflicts with the conclusions drawn by Lai and Lee (2024) in their systematic review of international studies focused on conversational AI tools for English language teaching and learning and those drawn by Xu et al. (2024) in their in-depth analysis of research on employing chatbots to enhance EFL teaching in K-12 and higher education contexts from 2010 to 2023. As reported by these reviews, Google Assistant was the most prominent chatbot among the studies while ChatGPT was less prevalent.

Whether being the most frequently investigated chatbot or not, ChatGPT has undoubtedly emerged as one of the most popular tools in English language education, which is unsurprising considering the fact that its launch in 2022 created a global sensation, significantly increasing attention on AI chatbots overall.

Figure 5

Publication trends by AI chatbot

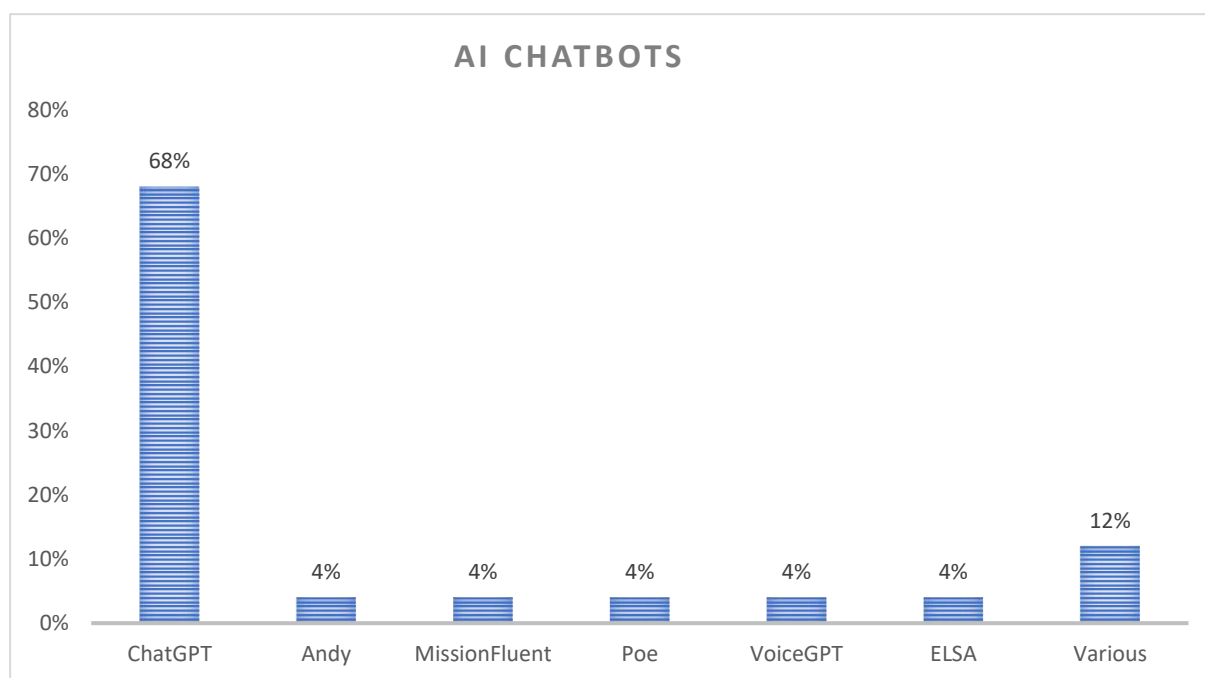
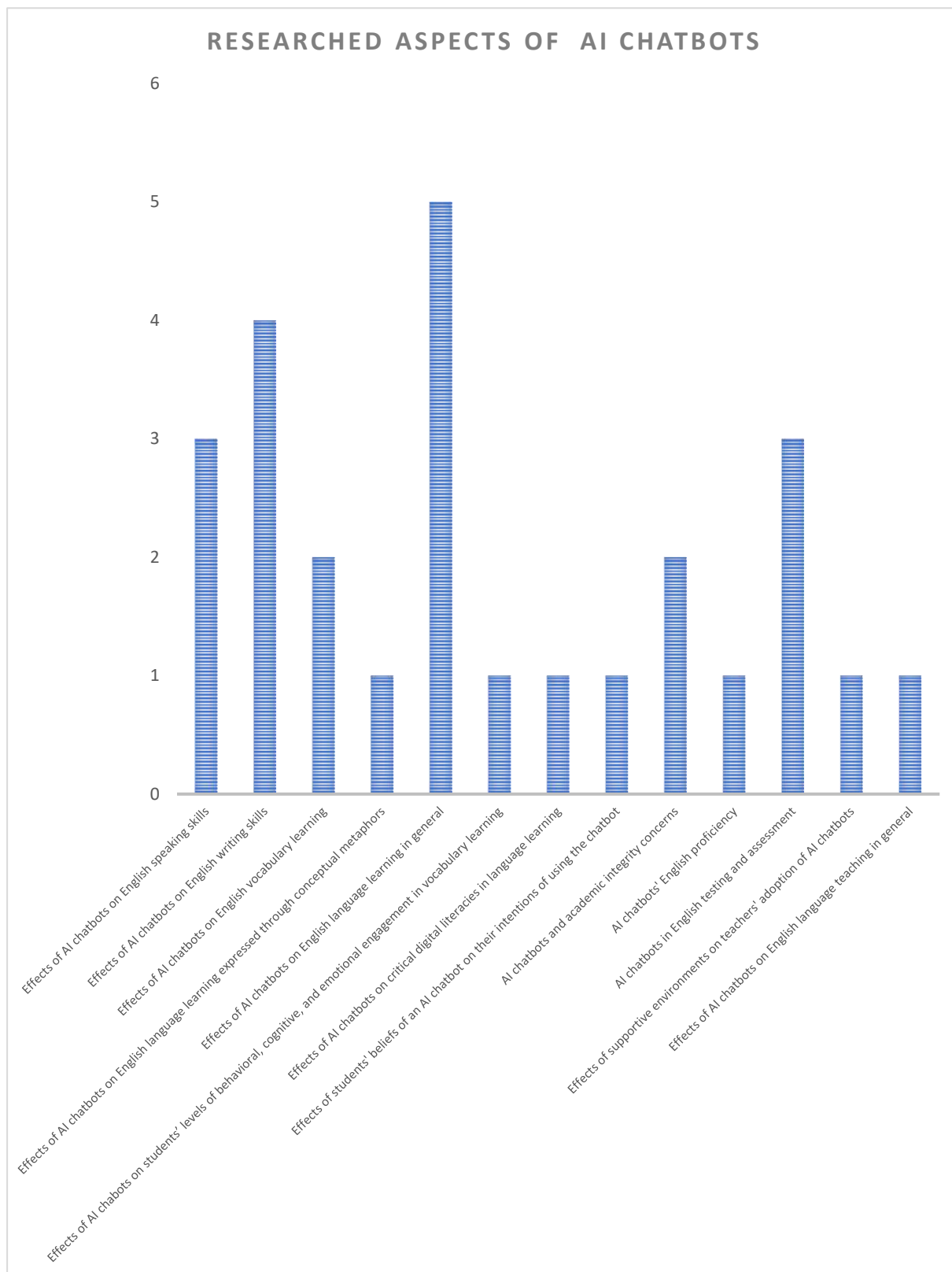


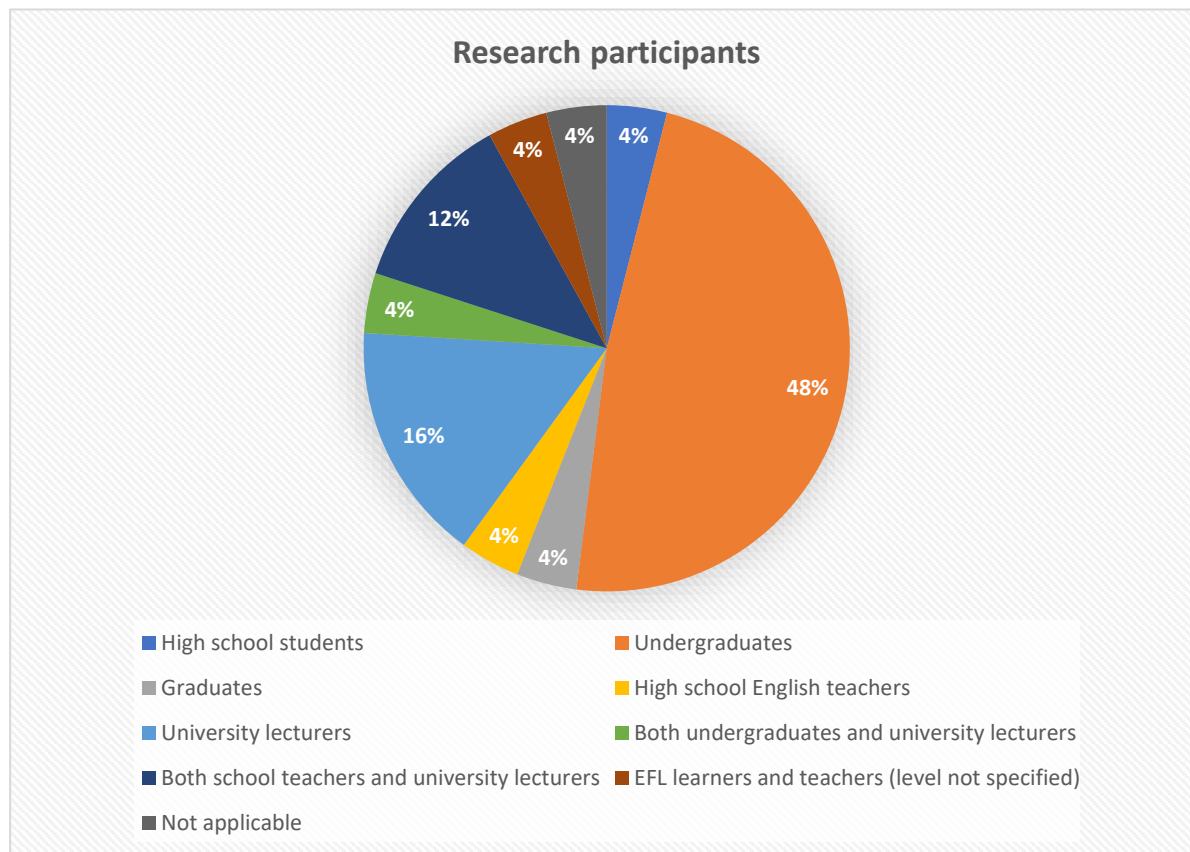
Figure 6 reveals that most of the available studies concentrated on the impacts of one or more AI chatbots on students' English learning in general or some particular aspects of English language learning such as speaking skills (overall speaking skills and pronunciation), writing skills (paragraph and essay writing), and vocabulary learning. The total figure for all these studies was 15. Three investigated the role of AI chatbots in English language testing and assessment and two examined the topic of AI chatbots and academic integrity. Other topics are the impact of an AI chatbot on students' engagement, their critical digital literacies in language learning, the effects of students' beliefs of an AI chatbot on their intentions of using the chatbot, the effects of supportive environments on teachers' adoption of AI chatbots, effects of AI chatbots on English language teaching in general, and AI chatbots' English proficiency; each of these is the focus of one study.

Figure 6

Publication trends by researched aspects of AI chatbots



Note: One study may investigate more than one aspect of AI chatbots

*Publication trends by research designs, participants, and data collection instruments***Figure 7***Publication trends by participants*

As depicted by Figure 7, nearly half of the studies involved the participation of undergraduates while the second most popular research participant group was university lecturers, with 16 % of the reviewed studies having them as participants. One study had both of these groups as participants. The predominance of undergraduate and university lecturer participants suggests that research on AI chatbots in English language and teaching in Vietnam predominantly focused on tertiary education contexts. A review on the application of AI chatbots in English language and teaching by Huang et al. (2021) and another review addressing the role of AI in English language education by Sharadgah and Sa'di (2022) also arrived at the same result. Less popular participant groups are high schoolers, high school teachers, both school teachers and university lecturers as a group, and graduates. One study engaged both EFL learners and teachers at unspecified educational and institutional levels, whereas another study analyzed answers generated by AI, so there were no participants.

According to the data presented in Figure 8, the significant portion (60%) of the reviewed studies followed a mixed approach, collecting both qualitative and quantitative data. One-fifth of the studies were qualitative and quantitative studies had the same figure. Similar findings were reported by Lai and Lee (2024) and Sharadgah and Sa'di (2022) when reviewing the use of AI in English language and teaching.

Figure 8

Publication trends by research methods

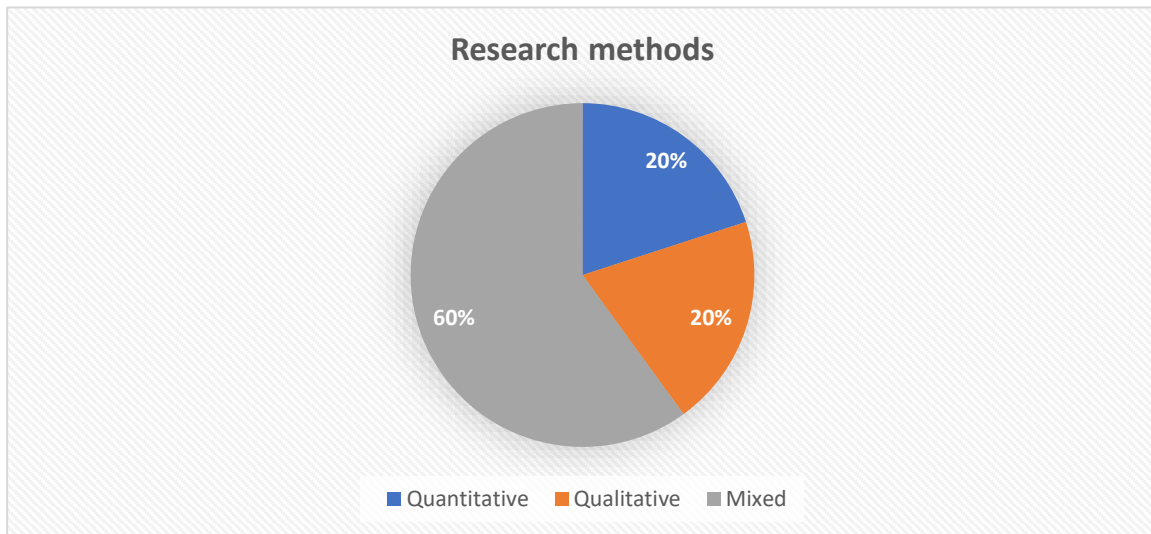
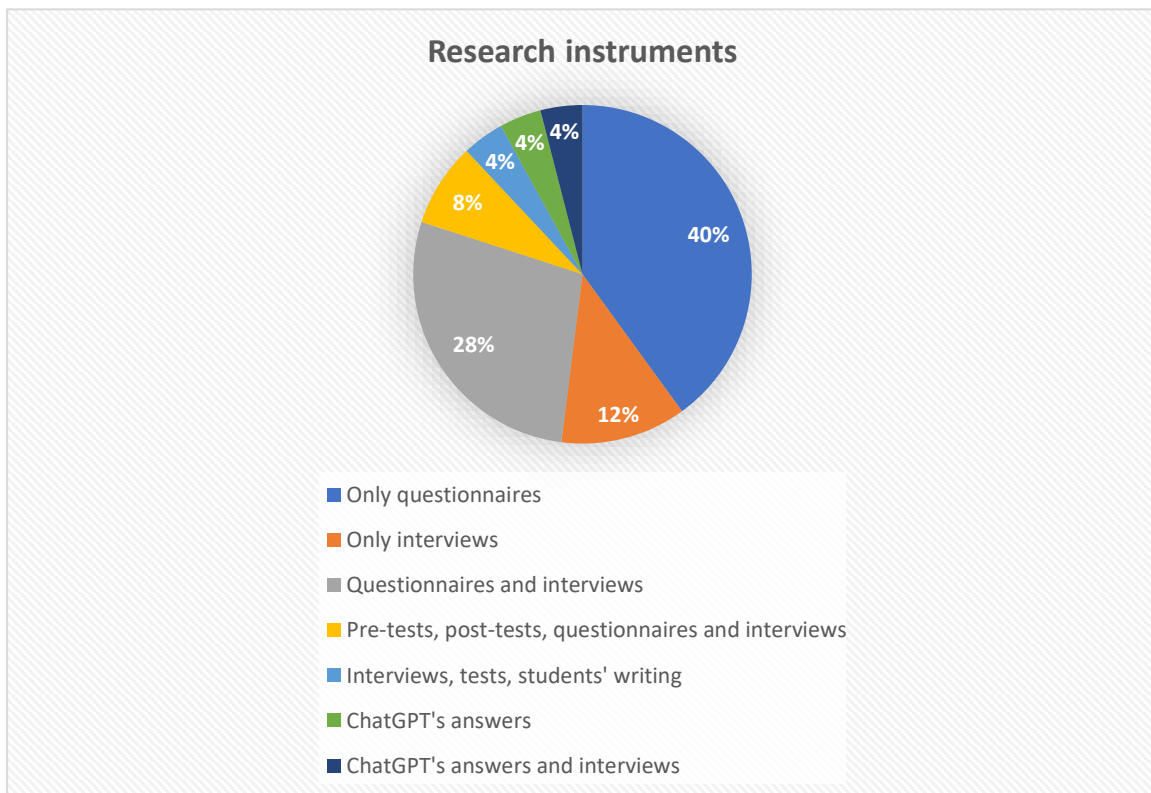


Figure 9

Publication trends by data collection instruments



Studies utilizing only questionnaires to collect data accounted for 40% of all reviewed studies; 28% of those studies leveraged both questionnaires and interviews. The figure for studies using only interviews was 12%. One study (4% of the total) made use of pre-tests, post-tests, questionnaires and interviews as data collection instruments. Another used interviews, tests,

and students' writing. There were two studies that analyzed ChatGPT's answers to specific prompts, with one combining the evaluation of ChatGPT's answers with interviews.

Conclusion

Although the quantity of available studies on AI chatbots in English language education in Vietnam is growing, it is still limited. With the modest number of available studies, the volume of articles published by Scopus-indexed journals is still small. As a result, much space is left for the future research on this topic in the Vietnamese setting. Future research may consider increasing the variety of cities or provinces where the studies are set, making relevant comparisons. Apart from ChatGPT, there should be more studies investigating under-researched AI chatbots. Regarding specific topics, some unpopular ones such as AI Chatbots and academic integrity, AI chatbots' impact on students' critical digital literacies in English language learning, the application of AI chatbots in language testing and assessment, and AI chatbots' language competency may be taken into consideration. Concerning research designs, due to the fact that most of available studies involved participants from university contexts, it is recommended that prospective studies recruit participants from other contexts, for example, high schools, middle schools or even elementary schools. More studies should also take advantage of multiple instruments to gather data. Overall, based on the discoveries of the current review, this paper calls for more empirical studies on AI chatbots in English language teaching and learning in Vietnam.

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Biodata

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An Investigation into Students' Perception of Using Call Annie as a Virtual Conversational Partner

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ABSTRACT

Keywords: AI, chatbot, students' perception, virtual conversational partner

There is no doubt that using AI tools to learn a foreign language has become more common in recent years. This study aims to explore students' perception of using Call Annie – an AI-powered tool – to practice speaking regularly, as part of their homework to find out their perceived advantages and disadvantages after conversing with the application. This research project employed 85 English majors at a university for the investigation, in which both quantitative and qualitative data were collected via questionnaires and interviews to observe their interactions with the Call Annie chatbot for homework assignments as conversational partners for three weeks. After the period, students were given surveys to record their perception, and after their final speaking test, a focus group interview was held with 3 students. Findings show students' willingness and confidence to utilize Call Annie in the future for their speaking skills, as well as their positive attitudes. However, the data also shows that students were worried about using the tool due to concerns about authenticity and language content. In the future, AI chatbots may be used as conversational partners, which could enable teachers to take more active roles in individualized approaches to teaching speaking.

Introduction

In this day and age, speaking has been recognized as the most important skill for English learners around the world, despite the fact there have been several studies on the optimal method to master speaking in the world of second language learning and teaching (Brown, 1994; Tran & Tham, 2015). Mahmudin (2023) pointed out a number of psychological issues that students have encountered, which might be the causes for students' unwillingness to talk in class. "shyness" or "lack of confidence" are one of the dilemma that students in some

countries, including Vietnam, are facing. This, in turn, has led to the emergence of AI-powered tools, or virtual speaking partners such as Call Annie, to fulfill the increasing need to practice speaking outside the classroom.

Studies by Shafiee (2024), Hsu et al. (2023) and Jeon (2022) have indicated students' positive attitudes towards the use of AI chatbots, with a reduced level of anxiety and enhanced degree of willingness to communicate (WTC) as students were encouraged to converse freely with the virtual characters without the "fear of making mistakes" in large-size classrooms. AI-powered tools using models of Generative Artificial Intelligence (GAI) have intrigued scholars worldwide with their applications in recent years. These models have employed advanced programming language to recognize patterns and generate new content like text, images, sounds, videos, which shed light on second language learning and teaching (Chan and Hu, 2023) with a range of tools regarding ChatGPT, Bard, and Dall-E. In light of the comprehension of complex prompts and human-like dialogues, there is growing research and interest in using GenAI across a variety of sectors. Therefore, research into chatbots would greatly help modern English classrooms where natural conversations with virtual native speakers could take place anywhere and anytime. According to Gupta et al. (2020), "chatbot" is a term that encompasses a wide range of formats and functions as it has been coined to be an application that replicates human contact via textual or auditory input. Therefore, concepts regarding "virtual tutor", "conversational agent" or "personal assistant" point to the fact that chatbots can differ in accordance with their multifunctional uses. Conversational AI, as depicted by de Barcelos Silva et al. (2020), was evolved in a more sophisticated approach thanks to the advent of Natural Language Understanding (NLU) and machine learning algorithms. A number of contemporary bots, or IPAs (Intelligent Personal Assistants) that have undergone deep training to assist humans bases on either spoken or written prompts could include Apple Siri and Amazon Alexa.

The potential role of AI and AI-driven chatbots in boosting students' academic engagement can be attributed to creating an interactive learning environment that motivates and engages students through precise, timely, and personalized feedback, contextualized responses, and a conversational interface (Almusaed, Almssad, Yitmen, & Homod, 2023). Furthermore, as Zou and Huang (2023) emphasized, AI-powered chatbots can pave the way for individualized and adaptable learning opportunities, motivating students to engage in the learning process regularly. Hsu et al. (2023) discovered that chatbots driven by artificial intelligence assisted lower language anxiety and boosted students' English willingness to communicate. Research by Bibauw et al. (2019) highlighted how important artificial intelligence is in offering immediate and tailored feedback—which is absolutely vital for language acquisition. In a study by Pham (2024), ChatGPT was perceived as an effective learning tool for students, particularly in providing academic resources and enhancing language skills, notwithstanding concerns about its potential to diminish students' independent thinking and reasoning abilities.

However, Holmes et al. (2022) underline the need of open data methods and strong security policies protecting student data. Moreover, the application of artificial intelligence in education has also experienced issues concerning access and fairness. Although artificial intelligence could democratize education by making high-quality information available to a larger audience,

students from underprivileged backgrounds could be left behind without access to the required technological infrastructure.

All in all, there has been a considerable amount of research into the linguistic and non-linguistic factors of AI-powered tools towards students' practicing skills. However, students' perceived benefits and drawbacks of using an AI tool and their emotional and behavioral engagement to practice speaking with a virtual character outside the class have been scant. Hence, to support teachers in English classrooms, this research has been conducted to identify the level of understanding about the potentials and concerns of Call Annie as a conversational partner among university students, mitigating the gap between their psychological factors and self-improvement in speaking English.

Literature review

Definition of AI

In 2023, Dasborough explained that "Generative AI" is a type of artificial intelligence that uses training data to make new, meaningful material, such as text, images, audio, and more. A lot of people are interested in this new technology. Models like DALL-E 2, GPT-4, and GitHub Copilot are changing the way we work and talk to each other. ChatGPT basically makes replies that sound like a person wrote them. This shows that it can write text as well as creative content like music and pictures. Generative AI might also use advanced machine learning methods, which could be very useful for creating multimodal material like text, audio, images, videos, and even three-dimensional models, which could have many uses. For example, ChatGPT is great at making text, while Midjourney and other tools are better at making images.

Although generative AI has brought about a lot of potential, it also springs up important ethical and social issues. Copyright violations in AI-made works of art, academic dishonesty like cheating and copying, and the risks that come with data privacy and security are all inevitable shortcomings, as stated by Gillotte (2019). Also, even though generative AI has a lot of promise, these problems need to be dealt with immediately to ensure it is used responsibly and ethically.

Definition of "Call Annie"

"Call Annie" app, which emerged in 2024, has been deemed as a new approach to learn a language according to Sharma (2023) and Wan & Moorhouse (2024). To be more specific, it makes conversations outside classrooms possible for students, using generative AI and GPT-3.5, thereby allowing users to interact with a speech-based chatbot. This app creates authentic conversations by use of natural language processing (NLP) and machine learning. Learners can also make both video and audio calls. Users of iOS, Android, and the web can engage with the AI character Annie or another character with various qualities and speaking manner. This facilitates practicing language in a range of contexts. Pressing a button enables users to create a voice or video call. The artificial intelligence will then direct the conversation depending on user level of involvement. Apart from "learn" mode for practicing particular language abilities, users apply prompts and requests to ask for the character's feedback or response. Many of the features, meanwhile, only apply if payments are made (Wan & Moorhouse, 2024).

Virtual Conversational Partners (VCPs)

Virtual conversational partners or VCPs have been programmed and promoted via software applications, in which verbal prompts are inserted through chatboxes or audio/video calls. They have been best known for their speech variations, physical movements associated with facial expressions or hand gestures, to mimic human in face-to-face interactions as their response for the initial contact from people, as shown in a study by de Barcelos Silva et al. (2020). Allouch, Azaria, & Azoulay (2021) also concluded that VCPs could potentially be speaking partners because they can work tirelessly with their accessibility and availability in educational institutes without native speakers. Liu et al. (2023) argue that AI-driven Virtual Conversational Partners (VCPs) have let people practice in an interactive and tailored way, changing their language acquisition. As for the adoption of VCPs in the learning of second languages, there are main benefits. Modern natural language processing (NLP) and machine learning approaches allow VCPs to give every student customized comments, corrections, and guidance in real time. VCPs offer a quiet, nonjudging space where students may express uninhibited, lowering the fear of using a language in a regular classroom. This is so since VCPs mirror how people genuinely use language and provide students with many real-life communication experience, therefore enhancing their immersion. Regarding the corrective feedback tool, Deng & Huang (2024) claimed that VCPs might assist students in their speaking, grammar, vocabulary, and fluency in a range of social contexts, which is accessible to people with busy schedules.

Emotional engagement

Emotional engagement has been termed and explored in a number of research studies hitherto. Zare et al. (2024) had regarded emotional engagement as factors associated with positive and negative emotions. Svalberg (2009) deduces that students with a high emotional attachment to learning are usually willing to make progress despite obstacles and more optimistic than those with negative emotions. A study by Pham et al. (2023) showed that students applying POE in their vocabulary practice expressed positive attitudes when they saw this as an enjoyable task, which boosted their interests and motivations in improving their lexical range. On the other hand, anxiety and boredom are considered negative emotions as they hinder students' participation in class. Brown (1994) described anxiety as "a feeling of uneasiness, frustration, self-doubt, apprehension or worry" as students' success in learning would be maximized with the minimum level of anxiety and heightened positive attitudes.

Willingness to communicate (WTC)

Gardner (1985) claimed that research on ready to communicate (WTC) in the framework of learning a second language concentrated on how mental elements like attitudes, objectives, and fear impact the process. Understanding why some language learners desire to speak a second language more than others while others may be scared or not want to need these things much. In terms of their communication demands with people in the target language, WTC in a second language depicts the possibility of someone speaking at any given moment (MacIntyre et al., 1998). This concept may vary based on the social contexts, the student's mood, and their perceived degree of fluency. Csizér and Dörnyei (2005) stated that WTC comprises many personal characteristics, like learning variables, that may significantly influence how

successfully someone learns and utilizes a second language. As Yashima (2002) noted, some students who know a lot of a language may have low WTC, which would restrict their opportunities to practice speaking and cause them to remain silent in class. Their lack of practice hinders their speaking development, reducing their proficiency. Yashima (2002) examined how attitudes, desire, psychological elements, and international views influence Japanese students's WTC in English. According to the findings, students with higher WTC level were more motivated to study English, leading to ease and confidence when using the language. WTC and the development of language competency are clearly linked. Learning languages more successfully may be facilitated by WTC improvement. By increasing their readiness to interact with others, these instruments may enable individuals to acquire a language more successfully and attain their linguistic objectives (MacIntyre et al., 1998; Csizér and Dörnyei, 2005; Yashima, 2002).

Results of previous studies

The advantages and disadvantages of applying AI chatbots into learning speaking

Generative artificial intelligence (GenAI) has recently become a useful tool for English education because of its many advantages that support the learning process. With a specific focus on ChatGPT in the learning aid functions, one project by Chan and Hu (2023) focused on college students' perception of generative artificial intelligence (GenAI) technologies. Most of the 399 undergraduate and graduate students in this study conducted in Hong Kong who responded showed positive views of GenAI and recognized its possibilities for tailored learning, writing help, and research support. As John Biggs' 3P model suggests, pupils' perceptions significantly affect their learning process and topic of interest.

Moreover, individualized approach has been mostly seen in the adoption of Gen AI when it comes to catering different learning styles. According to Chan and Lee (2023), artificial intelligence initiatives like ChatGPT let students—especially those who speak English as their first language—generate ideas and receive comments on their work in an instant manner. The immediate engagement that improves the learning environment helps students to develop their skills at their own speed. Furthermore, tools like the Intelligent Essay Assessor *help the assessment process, providing* consistent scores on written tasks and quick comments (Crompton & Burke, 2023). GenAI may also *help* teachers *create* original and interesting materials for language projects, as shown in a study by Dehouche & Dehouche (2023).

Although there are advantages, generative AI being applied second language classrooms is not without challenges. Students may become too reliant on AI technology, and according to Warschauer et al. (2023), it would hinder their ability to develop their critical thinking and writing *abilities*. While AI-generated writing might be helpful, it usually lacks the human aspects and understanding that human writers provide, which cannot prolong readers' interest in the material. Ethical issues regarding academic honesty, computer prejudice, data privacy and authenticity are also concerns, which might exert doubts on their accuracy and justice (Peres et al., 2023; Nguyen, 2023). Research by Nguyen (2023) revealed that an overwhelming proportion of teachers and students were aware of the negative impacts of AI applications

related to plagiarism and policies towards the implementation of these tools ought to be regulated by the educators.

Students' perception about the future use of AI chatbots

Students are optimistic yet cautious about AI chatbots in language learning. According to research, AI chatbots may improve engagement and customized practice in education. A large amount of research shows that students usually support AI chatbots in language learning contexts, notably due to their simplicity of use and innovation. Kim et al. (2021) found that South Korean EFL students liked AI chatbots for low-pressure English practice. Students improved their speaking abilities by using these chatbots to practice without worry of making blunders in front of others. Vietnam has also seen a variety of views of AI chatbots, notably in EFL instruction. Vietnamese undergraduate students were particularly interested in using AI voice chatbots for enhancing speaking abilities, according to Duong et al. (2024). Their research found that AI chatbots improved fluency and accuracy, indicating that language learners had a tendency to use the technology. Hoang et al. (2023) found that vocational students in Hanoi enjoyed applying AI chatbot apps, especially for pronunciation training because of the rapid and individualized feedback.

Despite these positive feedback, AI chatbots in education are still questionable. For instance, although students preferred the simple interface of use and innovation, they were wary of the chatbots' mistake correction and predictability (Belda-Medina et al., 2022). This cautious approach is consistent with Bibauw, François, and Desmet (2019), who found that dialogue-based Computer-Assisted Language Learning (CALL) systems, including chatbots, depend on design features like error correction and dialogue management. Students also worry about AI chatbots' limited corrective feedback and discussion subjects, which might impair language development. Kim et al. (2021) reported that students liked practicing English but complained about the chatbots' inability to detect different pronunciations and offer thorough feedback. This shows that although AI chatbots are useful for practice and engagement, their present capabilities may not match students' and instructors' pedagogical objectives, especially in sophisticated language learning areas like critical thinking and conversational subtlety. Chatbots' mistake correction and conversational depth were criticized by Trang (2021). Duong et al. (2024) also stated that students complained about the AI chatbot's incapacity to identify Vietnamese names and limited chatting subjects. These issues suggest that although Vietnamese students are receptive to AI chatbots, some features need to be improved to make them more successful.

Summary of studies

The advent of GenAI tools in the teaching and learning of English has shed light on the benefits and drawbacks of the degree to which the functions have been applied in classrooms. The research highlights significant benefits, including personalized learning experiences, reduced anxiety in practice environments, and enhanced accessibility for diverse learners (Chan et al., 2023; Kim et al., 2021; Hoang et al., 2023). However, the studies also identify limitations, such as limited interactivity and engagement, technical challenges in understanding diverse linguistic inputs, and concerns about privacy and academic integrity (Belda-Medina et al., 2022;

Mageira et al., 2022; Nguyen (2023); Duong et al., 2024). Students generally perceive AI chatbots positively but remain cautious due to their current technological limitations.

Research gap

All in all, there have been numerous studies on the advantages and disadvantages of employing AI chatbots for language acquisition in general. However, only a few studies have investigated students' perception of interactions with AI chatbots, such as "Call Annie." Additionally, there is a lack of research on whether students wish to continue employing AI programs for future speaking practice. This research aims to address these voids by undertaking a comprehensive examination of the advantages and disadvantages of "Call Annie" to improve communication skills. The research will also evaluate students' emotive investment in the speech-practicing app "Call Annie" and ascertain whether or not they intend to continue using it in the future.

Research Questions

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

1. What are the advantages and disadvantages of using Call Annie perceived by students?
2. What is students' perception about adopting Call Annie for their future use in speaking?

Methods

Pedagogical Setting & Participants

In order to address the research questions, the data for this study were gathered using participant interviews and questionnaires, which allowed researchers to see whether any issues were developing with the teaching and learning process. It also looked at how the students felt about using Call Annie, an AI Chatbot, as a virtual conversational partner. The primary setting for this research is Industrial University of Ho Chi Minh City which is located in Ho Chi Minh City and currently is one of the reputable educational and training institutions in Vietnam. The population of this research consists of 85 English majors from two speaking classes at the Faculty of Foreign Language Department at Industrial University of Ho Chi Minh City.

Design of the Study

The main justification for using a mixed-method approach in this study is that it allows researchers to collect both qualitative and quantitative data, which may help them understand the problems more deeply. By using both strategies, researchers may triangulate their findings and gain a deeper understanding of the complexities of the study subject.

The goal of using both quantitative and qualitative approaches is, according to Creswell & Creswell (2017), "to offset the weaknesses within one method with strengths of the other" (p. 196). Creswell and Clark (2017) note that this strategy enables the formulation of a superior degree of understanding in comparison to applying a single technique to individual research. Furthermore, they propose a set of basic characteristics that highlight significant elements of mixed methods research. They claim that researchers collect and analyze qualitative and

quantitative data systematically, rigorously, and deliberately that integrates the two kinds of data. The method used to compile this data will depend on the nature of the study and the researcher's philosophical perspective.

The quantitative technique works well for gathering a lot of data to make generalizations based on the findings (Babbie, 2020). However, qualitative research is useful in obtaining detailed information that may be used to produce recommendations for changes and a comprehensive knowledge of the assessment.

Data collection & analysis

Questionnaires

This research used a validated instrument developed by Chan and Hu (2023) to survey students' perceptions of generative AI technologies, including ChatGPT, inside higher education. The present research examines the use of AI, particularly Call Annie, in assisting college students with English speaking practice. This aligns with the original study's emphasis on student interactions with AI technology, hence necessitating this modification. The objectives of both studies are to ascertain the impact of creative AI tools on student learning, emotional engagement, and the likelihood of their use in academic tasks. This research examines the use of AI technologies in authentic spoken environments.

There have been changes made in some of questions to address the specific challenges associated with using Call Annie for speaking practice. For example, the first statement, "I understand that generative AI technologies such as ChatGPT may not be capable of completely managing intricate tasks," was modified to "I understand that Call Annie may struggle to assess my verbal responses in complex speaking tasks accurately." The elements were modified to illustrate the specific advantages of using Call Annie for speech practice. The statement was revised from "I believe AI technologies such as ChatGPT can help me save time" to "I believe Call Annie can assist me in saving time by providing immediate feedback on my speaking practice." The phrase was modified from "I believe that AI technologies such as ChatGPT can provide me with personalized and immediate feedback and suggestions for my assignments" to "I believe that Call Annie can provide me with personalized and immediate feedback on my speaking practice," thereby clarifying the focus on speaking tasks. The first question, "The value of university education is diminished by the utilization of generative AI technologies like ChatGPT for assignment completion," has been revised to "The development of independent speaking skills may be hindered by the use of Call Annie for speaking practice." This addresses concerns around the use of AI. This alteration indicates a heightened concern over excessive dependence on AI technologies for the development of self-communication abilities.

Interviews

Semi-structured interviews were selected as one of the main study methodologies for a variety of reasons. First of all, they make it easier to ask open-ended questions, which may encourage respondents to offer thoughtful and in-depth responses. Compared to structured interviews, which follow a set list of questions and may provide more complicated and thorough information, semi-structured interviews allow for more flexible questioning tactics. Second, semi-structured interviews allow for the exploration of new ideas and themes that may emerge

throughout the interview process, while simultaneously providing a framework to guarantee consistency in the data collection process.

Qualitative research in the social sciences favors the use of semi-structured and unstructured interviews to collect data (Silverman, 2013). Qu and Dumay (2011) confirmed that although conducting interviews with individuals or groups of participants seemed like the primary advantage, what mattered most was convenience for both interviewers and interviewees. In order to obtain more in-depth viewpoints and attitudes to bolster the final conclusions on the applicability and dependability of Call Annie in the development of speaking ability, the researchers conducted semi-structured interviews with three pre-selected students.

Data analysis

Before beginning the process, the researcher obtained authorization to conduct the study from the Industrial University of Ho Chi Minh City Foreign Language Department. The researcher also sent the Google form for the survey to the students she teaches. To reduce the variation between various interviewers, the researcher personally performed each of the three interviews online through the Zoom platform. Conveniently selecting the students suggested that the participants were selected according to how convenient it would be for the researcher to contact them.

This study combined data from questionnaires and interviews with qualitative and quantitative data for analysis. First, the researchers extracted the data from the surveys into an Excel document, which they then put into the SPSS (Statistical Package for the Social Sciences) application. Descriptive statistics were used to examine the frequency and proportion of each item (maximum, minimum, mean, standard deviation). After that, the data was arranged in tables for in-depth examination and assessment in written summaries.

The researchers were permitted to record on files during semi-structured interviews with the students. The responses given by the students during the interviews were transcribed, and a cross-case analysis was performed to show the overall patterns of the answers. Additionally, idea frequencies for each participant were computed and reported. The major concepts and shared viewpoints of the participants were reported using the data from the questionnaire, which was summarized, and the interview findings were written.

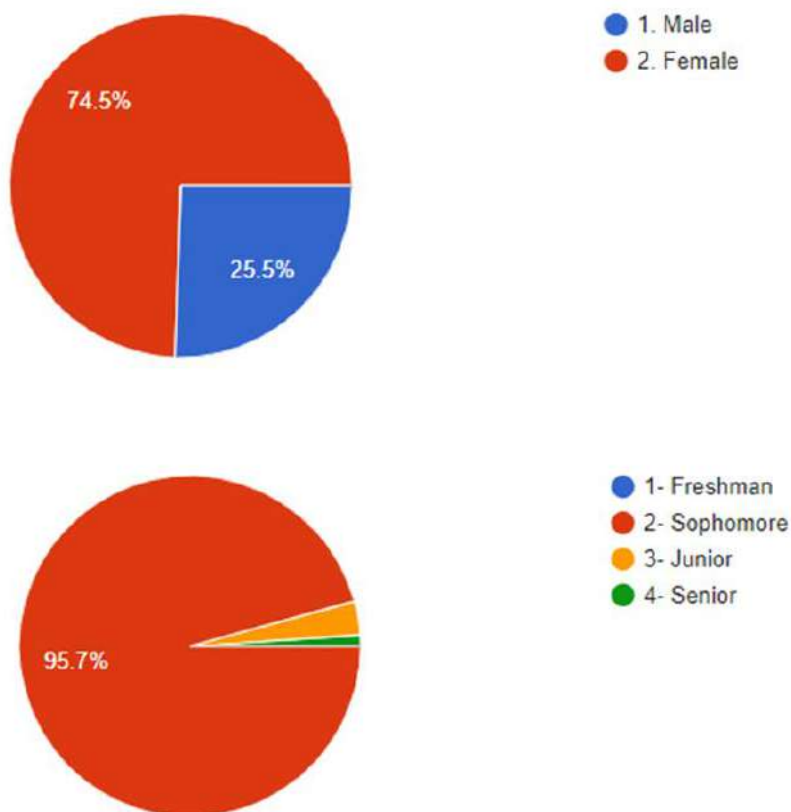
Results/Findings and discussion

Findings

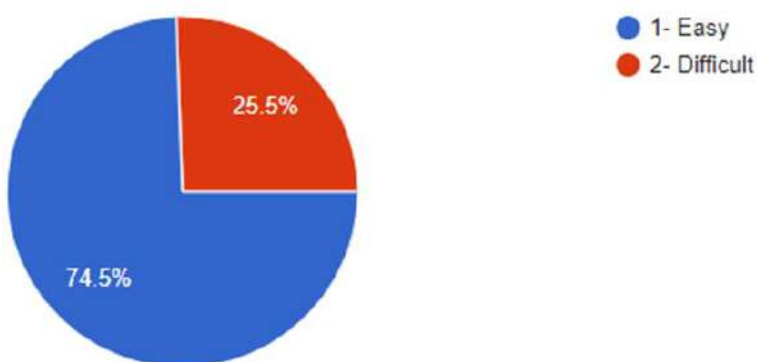
Findings from surveys

The data collected from the questionnaire was used to answer the first research question: What are the advantages and disadvantages of using Call Annie perceived by students?

Demographic information of respondents



Out of the 85 participants in this study, 74.5% were female students and 25.5% were male students. Furthermore, the majority of respondents were sophomores with 95.7%, while the remaining statistics belonged to students of three other years.



Moreover, 74.5% of the participants considered applying some technology to the learning process easy, whereas the rest (25.5%) indicated that this implementation was difficult.

Furthermore, the students mainly self-evaluated their IT skills as Intermediate (64.9%) and Beginner (33%), whilst advanced level students just took up 2.1%.

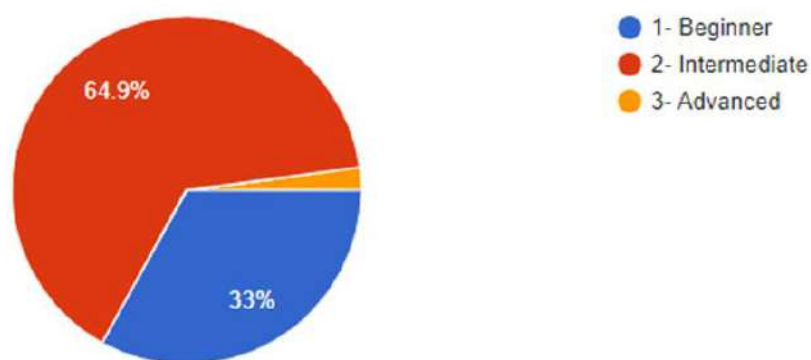


Table 1

Results of students' responses to the emotional engagement

The emotional engagement	N	Mean	SD
1. Call Annie helps me in reducing fear during speaking. (Anxiety)	85	3.83	.910
2. Call Annie helps me practice speaking in class. (Confidence)	85	3.88	.918
3. Call Annie forces me to practice speaking outside the class. (Confidence)	85	3.91	.889
4. Call Annie helps me to study confidently and personally. (Confidence)	85	3.89	.938
5. Call Annie gives me direct feedback on my speaking. (Confidence)	85	3.76	.921
6. I am happy to use Call Annie in speaking class. (Anxiety)	85	3.83	.936
7. This app can help me communicate with native speakers more easily. (Anxiety)	85	3.90	.867
8. I believe AI technologies such as Call Annie can provide me with unique insights and perspectives that I may not have thought of myself. (Confidence)	85	3.88	.878
9. I think AI technologies such as Call Annie are a great tool for shy students due to anonymity. (Confidence & Anxiety)	85	3.89	1.00

As illustrated in Table 1, most students shared positive agreement when it came to using Call Annie, with mean scores ranging from 3.76 to 3.91. With the greatest mean score ($M= 3.91$, $SD=0.889$) for the statement 'Call Annie forces me to practice speaking outside the class' and the lowest mean score ($M= 3.76$, $SD=0.921$) for the direct feedback given by Call Annie on students' speaking performance, indicating that while they highly appreciated the further practice of Call Annie beyond the class, it was sometimes unreliable when this platform provided direct feedback on the speaking performance of the students.

Furthermore, the data pertaining to the first item revealed a tendency that was somewhat comparable to that of the sixth and seventh items. To be more precise, the majority of participants ($M=3.83$, $SD=0.910$) stated that using Call Annie for their English learning activities reduced fear and anxiety, and at the same time increased their level of happiness ($M=3.83$, $SD=0.936$) and communication with native speakers ($M=3.90$, $SD=0.867$).

Finally, students who are timid can benefit greatly from AI technologies like Call Annie because of their anonymity ($M=3.89$, $SD=1.00$).

Table 2

Results of students' responses to the concerns about AI tasks

The concerns about AI tasks	N	Mean	SD
10. I am worried that generative AI technologies like Call Annie can generate factually inaccurate output.	85	4.18	.877
11. I am worried that generative AI technologies like Call Annie can show unfairness in their output.	85	3.68	.905
12. I am worried that generative AI technologies like Call Annie have limited emotional intelligence and empathy, which can lead to insensitive output.	85	3.47	.985

Descriptive data reveal that students' worries regarding GenAI were rather unfavorable. They gave the least favorable assessments towards the lack of emotional intelligence and empathy of generative AI systems such as Call Annie may produce output that is unpleasant (Mean=3.47; $SD=0.985$), while the highest ratings were given to the fact that Call Annie and other generative AI systems were capable of producing output that was factually incorrect (Mean=4.18; $SD=0.877$).

Table 3

Results of students' responses to the willingness to communicate using generative AI technologies

The willingness to communicate using generative AI technologies	N	Mean	SD
13. I can imagine using generative AI technologies like Call Annie in my English learning and the future.	85	2.90	.709
14. I believe generative AI technologies such as Call Annie can help me save time in practicing speaking.	85	3.00	.815
15. I think AI technologies such as Call Annie can provide me with personalized and immediate feedback and suggestions for my speaking practice.	85	3.37	.829
16. I think AI technologies such as Call Annie is a great tool to practice speaking as it is available 24/7.	85	3.17	1.028
17. I think Call Annie is a great application that can motivate me to speak English more.	85	3.72	.956

All things considered, the results point to students' favorable attitudes of GenAI technology. In both their future employment (Mean=2.90; SD=0.709) and speaking practices (Mean=3.00, SD=0.815), they would want to use GenAI technologies such as Call Annie. Students placed particular emphasis on its perceived value in offering tailored feedback (Mean=3.37; SD=0.829). They also perceived these technologies to be a great tool of practice since they provide a great source of motivation (Mean=3.72; SD=0.956) and are available 24/7 (Mean=3.17; SD=1.028).

Findings from open-ended questions

1/ What do you think about using Call Annie in practicing speaking skills?

2/ Do you have any recommendations for teachers to use this app in teaching English?

The response on "Call Annie" is quite positive, with over 75% of users praising its usefulness in developing English speaking abilities. Users continue to call the program "very useful" and "helpful," with many emphasizing how it improves speaking and listening skills. For example, one user stated that "It makes me feel more at ease communicating in English." The software remains particularly useful for introverts, with words like "great for introvert people to use this" focusing its suitable conditions for shy students. Furthermore, customers enjoy its ease, stating that it enables them to practice "whenever they want" without having to find the locations.

On the other hand, around 25% of customers reported technical problems. Comments such as "Annie sometimes can't hear me" and "she often does understand me but gives me incorrect information" highlight the app's continuous issues. Furthermore, some users believe that, although useful, the AI lacks a human touch, with one saying, "Annie has the emotional range of a brick wall."

Despite these issues, many users support for the app's integration into foreign language instructional contexts. Suggestions like "Teachers should apply it to teaching" and "Usage of the app should be encouraged among students" demonstrate the program's potential. Some even encourage utilizing it with younger learners, as one commenter mentions the app's capacity to "promote early language skills" in youngsters. However, worries concerning stability and relevance persist, with users reporting "unstable" performance and off-topic replies. Several also advocate for more instructor participation, stating, "Teachers should give more feedback and hints" to improve the learning experience. Taking a cautious approach, one user said, "I'll give this 10-15 years before applying to teaching to get maximum output."

Findings from interviews

The data collected from the semi-structured interviews was used to answer the second research question: What is students' perception about adopting Call Annie for their future use in speaking? Following an initial in-depth familiarization with the data, initial codes were carefully developed to identify and categorize key insights systematically. The goal was to analyze the data and identify the tendencies that addressed students' perceptions of utilizing Call Annie for their future use in speaking. These initial keywords were then refined and grouped into basic themes, which were further organized into broader categories, regarding perceived advantages and disadvantages, willingness to use in the future.

Perceived advantages and disadvantages

Participants using the "Call Annie" program for speaking practice reported an array of positive emotions. Participant 1 showed excitement about the utilization of the AI tool: "I am genuinely eager to practice speaking English with AI Annie." I previously said that while use Annie, I can engage in conversation smoothly" The participants exhibited increased confidence owing to the AI's capacity to provide organized debate topics. Participant 2 agreed, noting, "I have significant confidence because engaging in dialogue with an AI presents example topics, allowing students to brainstorm what to express when conversing with a real person." Furthermore, the application's design and customization functionalities enhanced user engagement. Participant 2 expressed gratitude for these attributes, remarking, "The app's layout is my favorite aspect."

The planning and offering of two-way discussion topics is seen as a benefit. This tool really helped me in preparation for real-life experience. Participant 2 said, "Interacting with AI can provide you with information and examples on difficult topic, which you can then employ in discussions with real individuals." Participant 3 expressed much appreciation for this feature, stating, "I am particularly fond of that function as it helps with the correction of pronunciation." Individuals saw the AI's ability to provide accurate spoken samples as a considerable benefit, especially for those attempting to ignore regional accents. Individual 3 said, "People worldwide demonstrate inaccurate pronunciation as a result of their accents..."

Participant 1 specifically acknowledged the program's use for IELTS preparation: "The Call Annie application provides a comprehensive selection of vocabulary and lexical resources for IELTS speaking, an essential evaluation for all English learners."

Participant 1 said that the software enhanced his learning beyond mere language competency, declaring, "Employing this app expands my perspective, enriches my intellect, and augments my knowledge." I have little knowledge of the world and want to get a deeper insight. Participant 1 commented on the versatility of Call Annie as a language acquisition tool, highlighting its effectiveness for learning English and other languages. He said, "I use it daily to improve my speaking abilities, and I also apply it to hone my Chinese skills."

Concerns over AI's ability to provide feedback were also observed. Interviewees indicated several problems with use the "Call Annie" program to improve speaking skills. Participant 3 articulated apprehension around the lack of authentic human connection, which they considered vital for developing good communication skills. "In modern society, it is essential to interact with a real person rather than a programmed automaton," said Participant 3. Participant 3 expressed concern that over-reliance on AI might lead to a decline in speaking skills and increased fear in real-life interactions. He said, "I believe individuals will invariably depend on AI in the future." We shall forfeit our speech faculties and endure considerable worry when confronting that individual in person. Participant 3 highlighted that essential elements of communication, such as eye contact and voice modulation, were deficient in AI-mediated interactions. He said, "During a conversation, one should sustain eye contact and can perceive how individuals employ language, adjust their vocal modulation, and augment their attractiveness to the opposite sex." Participant 2 said that "at times it provides information that is excessively general or overly detailed and tangential," perhaps leading to confusion or irrelevant educational experiences.

Williness to use the app in the future

During the talks, the interviewees had a range of opinions on how the "Call Annie" app could be used to improve speaking skills and how it should be used in the future. Some users said they were very eager to keep using the app, while others were not so sure.

Participant 1 made it clear that they planned to keep using the app by saying, "To be honest, I'll use the Call Annie app in the future." The Annie app is very important to me right now. I use it every day to improve both my speech and Chinese skills. This person liked how accurate and quick the AI answers were, which can maintain their practice without interruption. They added, "Because AI apps give accurate responses, and Annie always answers the question directly with no limit interruption, I think any apps will develop more and more in the future."

Also, Participant 2 said, "I think I will use this app in the future for speaking English." They were also interested in using the app to practice speaking. Because talking to AI can give you information and examples about a lot of different topics, which you can then use when you talk to a real person.

However, not all participants were as excited about how AI could be used to help people improve their speaking skills. Participant 3 was hesitant and said, "Being an outdoor person, I will not agree to use AI in the future." I think people should get together and talk because during a chat you can make eye contact and learn more about how they speak, what words they use, and how to create bonds with other people.

Discussion

Overall, the participants had highlighted their emotional perception of the advantages and disadvantages of employing GenAI technologies, as well as the level of confidence in utilizing these tools for their academic studies in the future. However, **worries** were also noticed about GenAI's limited emotional intelligence, output unfairness and inaccuracy, and possible effects on social values and speaking skill progress. This aligns with studies from Zare et al. (2024).

In both the current study and previous research, students reported positive emotional responses when interacting with AI chatbots for speaking practice. The present findings indicated that many students felt excited and confident while using Call Annie, with participants emphasizing the app's ability to provide structured conversation topics and customization features that helped sustain their engagement. This finding aligns with the results from prior studies. As noted by Kim et al. (2021), students in South Korea also found AI chatbots helpful in creating a low-pressure environment, which allowed shy students to practice without the fear of making mistakes in front of peers. Similarly, Hoang et al. (2023) observed that students using AI chatbots experienced improved speaking confidence, particularly due to the non-judgmental features of the app. This suggests that AI tools such as Call Annie **generally promote** positive emotional engagement in language learners by reducing anxiety and providing supportive learning area.

The educational benefits of AI chatbots, especially in supporting speaking skills, were widely recognized in both the current study and the reviewed literature. Interview participants in this study highlighted several educational advantages of Call Annie, particularly in improving pronunciation and expanding vocabulary. This finding is consistent with the findings of Duong et al. (2024), who reported that Vietnamese students using AI voice chatbots for speaking practice experienced improvements in fluency and pronunciation. Similarly, Hoang et al. (2023) found that AI chatbots played a crucial role in helping students improve their pronunciation accuracy, especially in contexts where access to native speakers was limited. This shared perception across studies reinforces the idea that AI chatbots are effective tools for developing critical speaking skills, particularly in non-native English-speaking contexts.

Besides the promising prospects, the research also exposed obstacles surrounding GenAI technologies. In this study, students voiced concerns about how it would affect the value of their speaking skills, and the ethical issues, especially plagiarism, because they find it hard to distinguish originality in work, which were similar to the results from Duong et al. (2024) and Kim et al. (2021). A major concern raised by students in this study was the lack of authentic human interaction. Participant 3, for example, expressed frustration with the absence of body language such as eye contact and intonation, which are essential in real-life interactions. This mirrors findings from Belda-Medina et al. (2022), who noted that students found AI chatbots lacking in meaningful, dynamic conversations, which might result in superficial and robotic statements.

Furthermore, concerns about AI's ability to provide individualized feedback were consistent in both this study and previous studies. In this study, Participant 3 raised concerns about AI's inability to grasp idiomatic expressions and humor, a limitation also noted by students in the study by Mageira et al. (2022) and Nguyen (2023). The inability of AI systems to process

different linguistic inputs and respond to complex communicative contexts, such as sarcasm or humor, presents a significant barrier to their effectiveness in language learning. This highlights an important challenge that needs to be addressed in the development of AI-based language learning tools.

Finally, regarding the extent of willingness to use in the future, findings reveal divided views on the future acceptability of artificial intelligence chatbots for speaking practice, a phenomenon already seen in the existing literature. Certain study participants expressed enthusiasm for continued **Call Annie use, while others hesitated**. Participant 3 expressed a desire for genuine human interactions and articulated apprehensions over reliance only on artificial intelligence for communicative development. Similarly, Belda-Medina et al. (2022) cautioned students—concerned about the insufficient knowledge and error correction abilities of AI chatbots—to master their speaking skills.

Conclusion

In conclusion, AI techniques like Call Annie can improve language acquisition. This study's data of positive emotional involvement shows that confidence enables students to practice more freely and take linguistic risks. Students say this technology may help shy students talk in class since the one-on-one connection with an AI partner reduces the pressure and anxiety of speaking in front of classmates. Teachers may also encourage students to utilize Call Annie to explore different themes and settings to improve their vocabulary and conversational abilities. Call Annie also lets students try out numerous themes and conversation techniques to improve their fluency and flexibility in varied speaking situations. To balance efficient usage and mistake correction features, students should be careful while using the app for academic work to avoid losing enthusiasm during social conversations in both virtual and practical contexts.

However, the findings indicate that AI chatbots should be used as supplementary tools rather than primary speaking partners in language learning. Furthermore, it is important for students to be mindful of AI's limitations, particularly in areas such as error correction, contextual appropriateness, and discourse complexity. Over-reliance on AI-generated responses could lead to superficial language development, reducing engagement in real-life conversations. To mitigate this, educators should implement structured scaffolding techniques, where AI is used for pre-task rehearsals and fluency exercises, followed by peer discussions and instructor-led speaking tasks to refine accuracy and contextual appropriateness.

It is also noted that a greater and more varied sample size in future language acquisition research will help to generalize results. Longitudinal research of language learners would be of great importance for educators in better understanding the long-term consequences of artificial intelligence technology. This would encourage academics opportunities to investigate how artificial intelligence technology influences language acquisition. Therefore, the use of artificial intelligence systems in language learning shall be in need of ongoing investigation. Comparative study reveals their goals and strengths, thus helping teachers and producers to develop language learning tools. Furthermore, researching artificial intelligence in group rather than individual language learning environments might allow teachers to include these technologies into their lessons.

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Biodata

Anh-Duong Nguyen has obtained 10 years of teaching the language to a diverse population of learners in a number of academic contexts (universities, businesses, language centers) until now. The areas of her research interests are using technologies in teaching English, curriculum designs and methods in teaching English skills.

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Practice Report: On the development of medical English ESP learning model via VR space in collaboration with Finland

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ABSTRACT

Keywords:

VR platform, medical English ESP, COIL, collaboration with Finland

The paper outlines the construction process of a medical English Collaborative Online International Learning (COIL) model developed in collaboration with universities in Finland and the USA in a 3D virtual learning space (metaverse) mediated by Cross Reality (XR) technology. This technology mobilizes all aspects of Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR). This paper will describe the development and construction of a medical English COIL model developed in a 3D virtual learning space (metaverse) mediated by Cross Reality (XR) technology in detail. It will then present a report on the actual lessons conducted using the model. Furthermore, using the model, it will examine the development of metacognitive ability and the L2 ideal self of the students in the classes. It will also investigate whether it is possible to learn medical English in a communicative way.

Introduction

Under the spread of Covid-19, online classes utilizing web conferencing systems such as Zoom, Webex, and Google Meet have become common. In response to these global trends, the principal investigator of this research began developing and experimenting with synchronous and asynchronous learning environments for COIL-type classes with the Nursing Department at Jyväskylä University of Applied Sciences in Finland (hereafter referred to as Jamk) as early as 2017. This pilot study focused on an ESP program for medical English. COIL represents an educational methodology that employs ICT tools to facilitate collaborative learning between two or more countries. It was first established and employed by the State University of New York (SUNY) COIL Centre in 2006. It enables students to experience diverse cultures while remaining in their own country, facilitating mutual learning across countries (and even within countries) at no cost. One of its key advantages both for teachers and learners is the potential

for facilitating collaborative research and learning, which may result in the internal internationalization of the university and the local community.

As a result, real-time interactions in English with overseas instructors and students became possible even through screens. Many participating students experienced a freshness in international communication that was not present in traditional classes and demonstrated an increased motivation for English learning. This suggests the potential for fostering intercultural communication, multicultural coexistence knowledge, and language skills while staying in Japan.

However, after some time, feedback from participating students indicated several issues, such as “unable to have conversations with the same sense as in a physical classroom” and “a lack of shared space leading to passive behavior and becoming merely listeners.” These comments revealed the limitations of this teaching method. Additionally, feedback from the Finnish side noted that “even though faces can be recognized on the screen, the spatial separation between participants remains unchanged.” Indeed, with the current mainstream 2D screens like those used in Zoom, participants’ faces are simply lined up on the screen, often leading to a one-way communication style, and interactive exchanges between students can be challenging. Consequently, even in situations suited for intrinsic motivation, creating a sense of presence and immersion in the class has been difficult.

Literature review

Ikeda (2020) [1] identifies a significant challenge within COIL, noting that it often manifests as a superficial, one-time intercultural exchange. However, due to its foundation in collaborative learning practices, COIL has the potential to foster the simultaneous development of various skills and competencies among participants. While the initiative has facilitated real-time online communication with international partners, technical limitations inherent in web conferencing tools have hindered deeper engagement and reduced the volume of meaningful contributions from students.

As Ikeda and Fujii (2021) [2] observe, expectations regarding the implementation of COIL in VR spaces and meta-verses, and the enhancement of learner mobility, are key considerations. However, it should be noted that the use of VR spaces for learning purposes remains a relatively recent innovation in Japan, having only emerged in recent years. Consequently, even at Kansai University, where the development of COIL environments is most advanced, there is an absence of concrete reports on practical examples in Japan.

In response to these challenges, the present study highlights the potential of spatial mobility within 3D virtual environments to enhance coexistence in learning spaces and promote active participation (Jeong, Lim, & Ryu, 2021) [3]. The research investigates whether the advantages of spatial mobility and social interaction within the metaverse contribute positively to the dynamics of online education, concluding that such mobility significantly enhances the sense of community in learning environments. According to Sá and Serpa (2023) [4], learners can have immersive experiences of spaces that cannot be experienced in reality and consequently

improve strategic and comprehensive thinking skills, problem-solving skills, and learn skills necessary for the real world.

Moreover, the literature on foreign language acquisition utilizing Extended Reality (XR) technology has proliferated in recent years (Hein et al., 2021; Xinyi Huang et al., 2021) [5]. Li and Lan (2022) [6] introduced the term Digital Language Learning (DLL) to characterize the emerging digital technologies that facilitate language learning, including XR, natural language processing (NLP), machine learning, and automatic speech recognition. As for DLL, Li and Lan further say in the same article that “Because of its highly interdisciplinary nature, DLL can serve as an approach to integrate cognitive, social, affective, and neural dimensions of L2 learning with new and emerging technologies including VR, AI, and big data analytics.” By integrating these technologies, users can engage in interactions that closely resemble real-world experiences in authentic learning environments (Nicolaidou et al., 2023) [7].

As for ESP, in Japan, English language education in nursing faculties was not a popular choice in the past. However, at the beginning of the 21st century, there was a rapid progression in society's globalisation, which resulted in an expansion of the number of foreign visitors to hospitals. Consequently, nurses in clinical practice were required to communicate with patients in English. Furthermore, the results of a nationwide survey of nursing students' classes conducted at the time demonstrated a growing need for practical English language learning instruction. Although not referred to as ESP, the number of nursing faculties that adopted English language materials with medical topics increased rapidly, with about 80% of nursing faculties now offering ESP specifically for medical and nursing courses. According to Nagasaka and Uchida (2004) [8], the concept of collaboration between English and nursing teachers has been traced back to Dudley Evans & St John (1998) [9] and Hutcheson and Waters (1989) [10].

With regard to language teaching using VR spaces, research has shown that language training activities in Second Life were shown to make a positive contribution to the improvement of students' language skills (Nguyen et al., 2021) [11]. Moreover, Tran (2021) [12] shows the importance of learners' attitudes and social interactions especially towards virtual EFL classes, with the finding that classroom discourse should be more focused during online courses.

In light of the aforementioned considerations, it is imperative to identify strategies for enhancing the efficacy of COIL-type learning practices that have been implemented thus far. Additionally, it is crucial to determine how these practices can be effectively integrated with conventional learning activities

Research Questions

In order to respond to the aforementioned questions, this research project is designed:

1. To create a three-dimensional virtual English learning environment, also known as the ‘metaverse’, utilising XR technology.
2. To develop a new model of COIL for medical English learning, in which the students' output-focused tasks are assigned and their ability to communicate is improved step by step.

Implementation

After the afore-mentioned learning environment has been established, classes will be conducted based on the developed model.

Methods

The development of VR space

The initial plan of this study was to apply CG processing to a 360° panoramic image of a Juntendo University classroom, which was captured with an all-sky camera (yielding a 360° panoramic image in all directions, up, down, left, and right). The objective was to install this image (Fig. 1) in a virtual learning environment. As a 3D virtual learning space on the web, it was discovered that Norway's FYND had already developed a 3D learning space with an extremely high degree of precision (Fig 1). It was determined that utilizing this space would be more cost-effective to utilize this space than developing a VR space from scratch.

Fig 1. (Fynd Core)



It was thus resolved to employ this space.

Subsequently, a step-up learning model comprising three graded outgoing tasks, arranged in order of difficulty, was developed to form the core of the learning activities to be conducted in the space. The pilot study before this research identified the shortage of caregivers due to the super-aging population and care by robots as a common social problem in Japan and Finland. Accordingly, subjects pertaining to anti-ageing measures, including “health promotion,” “gerontotechnology,” and “comprehensive community care,” which were frequently requested by students from both countries who participated in previous studies, were designated as topics

for each phase of the investigation.

The development of COIL model

In order to optimise the sequencing of tasks in learning activities with the objective of enhancing communication skills, the SSARC (Simplify, Stabilise, Automate, Restructure, Complexify) model, which Robinson (2010) [13] graded in accordance with its cognitive complexity, was employed as a reference. The Robinson model, which was graded based on cognitive complexity, was used as a reference to restructure and complexify the learning tasks, arranging them in a progressive manner that gradually introduces more complex tasks. Moreover, English-Medium Instruction (EMI) was implemented as the pedagogical approach of the model with the objective of reinforcing the students' positive attitude towards learning in English, in alignment with the highly realistic learning in the virtual space. Additionally, it aimed to cultivate the “situational awareness,” “situational analysis,” “situational judgment,” and “situational prediction” skills essential for nurses. The five levels of competency required for nurses, namely ‘understanding the situation’, ‘analysing the situation’, ‘predicting the situation’ and ‘overcoming the situation’, were divided into three steps, with an attempt to arrange the tasks in such a way that students are clearly aware of them and to facilitate the elicitation of student comments.

Three Step Model

The content of each step is described in detail below.

Step I (Simplify, Stabilise and Automate): the promotion of health through the enhancement of situational awareness.

A presentation is given on a screen set up in the space, introducing health activities targeting older people in different countries and the role of health workers. The presentation employs an intimacy-oriented diffusion task (divergent task) to engage the audience. Through question-and-answer sessions and interviews, the participants develop mutual understanding with Jamk students on a formal knowledge level, and engage in cooperative learning that fosters solidarity while building close interpersonal relationships.

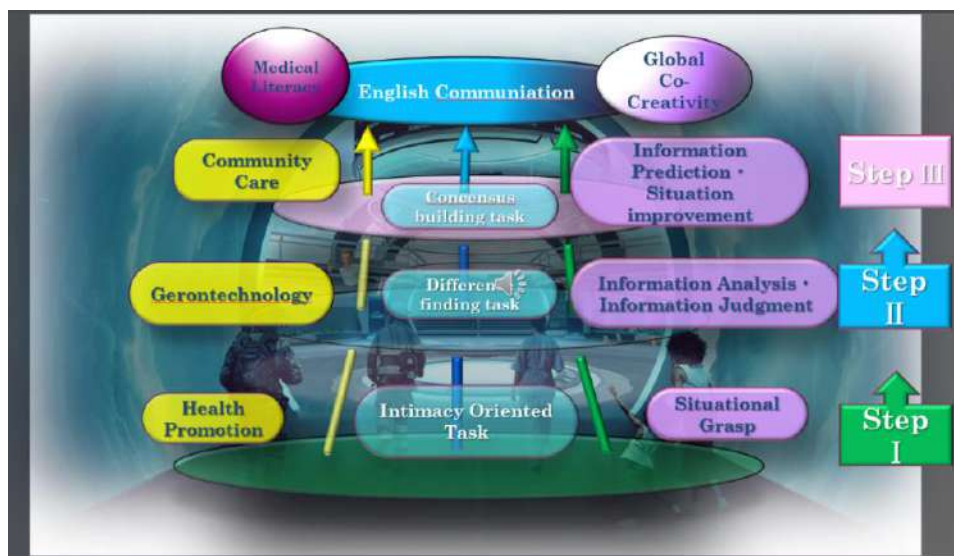
Step II (Restructure): The objective of this step is to develop the participants' situational judgment and situational analysis skills in relation to gerontechnology.

A difference-finding diffusion task is employed to facilitate the provision of information on care robots and AI from each other's countries, with a subsequent presentation comparing and analysing this information. By introducing the actual situation in Japan to Jamk students and comparing and analysing it, mutual understanding at the level of tacit knowledge, such as awareness of the heterogeneity and homogeneity between different cultures, will be promoted.

Step III (Complexify): Comprehensive community care [Developing the ability to predict and overcome situations].

Fig 2.

Three Step Up Model



Through the convergent task, mixed multinational groups (5-6 members) are formed with Jank students to exchange opinions and hold discussions on the theme of home nursing, which is expected to become increasingly important in many countries in the future. The aim is to reach a consensus in the group through an international co-creation type collaborative presentation on the process leading to this consensus. A conceptual diagram of this model is shown in Fig 2.

Implementation in Class

A total of 20 students and teachers from two universities will participate in 12 virtual lessons. Ten students from Juntendo University, who are enrolled in English Communication II. They have achieved a TOEFL iBT score of 460 or above, or an Eiken (one of the most popular English Proficiency Tests in Japan) Level 2 certification.

Fig. 3

Organization of each unit

Organization of each unit(ex. Gerontological Nursing)

1st	Gerontological Nursing	Reading Assignment	Health Care Support by Robots and AI	VR & Contact
2nd		Idea for Presentation	Lecture by Jank Teacher	VR
3rd		Presentation Practice	Lecture by English Teacher	Contact
4th		Presentation	VR Session With Jank Students	VR

Schedule of the 4th Class

I . Mini-Lecture by Japanese Teacher “Robotic Device for the Elderly” (15mins)

II . Presentations by Juntendo students (30 mins)

Group A “Robots to support ADL(Activities of Daily Life) of elderly people”

Group B “Communication Robots: how do they mentally heal elderly people”

Group C “Interest-provoking Data on Robots and AI use for elderly people”

III . Breakout Room Discussion (30 mins)

Ten Jamk students led and instructed by Vehmaskoski joined them. The lessons will be conducted based on the models. Each participant is required to create an avatar and upload it to the virtual space. As is shown in the Fig.3, each unit of the teaching model is allocated four sessions (90 minutes per session). The first session comprises an exploratory learning session with mini-lectures delivered by nursing teachers from both countries. The second session consists of a lecture by Vehmaskoski that aims to provide Juntendo students with ideas for their presentation. The third session is for the practice for the presentation. This session is led by Yamashita. The students' pronunciation and choice of words including grammar are checked and corrected if it is wrong. In the fourth session, Juntendo students, divided into three groups and located in their own rooms in VR space, will make presentations on the chosen topics. Jamk students are also allocated into one of those rooms. After their presentations are over in each room, Juntendo students answer questions from Jamk students or they can go directly into the discussion. The sample unit shown in Fig.3 has gerontechnology as its topic and the difference finding task as its main objective. In one of the rooms, a Jamk student asked whether there is any resistance to being cared for by robots in Japan. In response, there was an answer from a Juntendo student who said, 'Robots do not have likes and dislikes, so they can treat people who need care fairly'. These exchanges were both thought and interest provoking.

Results/Findings and discussion

A survey was conducted on the development of metacognitive skills and the development of L2 ideal self and L2 ought-to self in 12 participating students in a COIL environment using the newly introduced Zoom. Surveys were administered before and after the study to examine changes in.

Metacognitive skills

According to Okmawati(2020) [14], the acquisition of metacognitive strategy is very important in that it makes learners aware of the learning style and helps them use the strategy to activate, observe, and evaluate the learning. Metacognition can be categorised into two broad classifications: 'metacognitive knowledge' and 'metacognitive skills'. The former is further subdivided into three categories: 'declarative knowledge', 'procedural knowledge' and 'conditional knowledge'. The latter is divided into the following subsections: 'planning', 'information management strategies', 'monitoring', 'debugging strategies' and 'evaluation'. The by administering 52 questions developed by Scraw.

The format is based on a six-level Likert scale. The development of metacognition is evidenced by children who previously spoke unilaterally about any topic of their choosing realising that 'I don't feel like my story is being understood very well by the other person'. This can be observed in children who previously spoke one-sidedly about topics of interest, but now realise that they are not being understood very well and change how they explain things.

Results of metacognitive ability verification

All 12 students participating in the class were asked to answer 52 questions on the MAI (Meta-Awareness Inventory) developed by Scraw using a six-point method. The results were subjected

to factor analysis and extraction by adding a Promax rotation. According to the results, Monitoring & Planning skills were extracted as the main factor, followed by Debugging Strategy and Self-evaluation were found to be influential as the second and third factors. For these three factors. A comparison of the pre- and post-survey results for these three factors was as follows. Significant differences in the development of these four metacognitive skills were found, indicating that the established learning environment was effective. The results show that the implemented learning environment was effective. Repeated ‘monitoring’ and ‘control’ through metacognition is directly linked to personal growth. Participating students can acquire the ability to look at themselves objectively and find their weaknesses through ‘monitoring’ and develop themselves quickly by ‘controlling’ their thoughts and actions in a positive direction based on their weaknesses, respectively.

Table 1.

Results of Metacognitive competence validation

	Pre-Research		Post-Research	
	Mean	SD	Mean	SD
Monitoring & Planning (20 items)	3.11	1.43	3.56	1.13
Debugging Strategies (9 Items)	3.36	1.32	3.74	1.32
Self-Evaluation (7 Items)	3.3	1.38	3.41	1.11

Development of the L2 ideal self (ideal-L2 self) and the L2 obligatory self (ought-to-L2 self)

The L2 ideal self is defined as an idealised representation of the child’s future self when using a second language (L2: second language). The L2 ideal self is a concept that refers to the idealised self-image of what the child would like to become in the future using their second language (L2). In the context of aspiring to write a book in English in the future, it is essential to recognise that the motivation for learning is to bridge the gap between the ideal self and the current self. In contrast, the L2 obligatory self is the self that others expect of you, i.e. the self you ‘must become’. This is the self that is expected of you by your family. This is exemplified by a person who engages in learning for the purpose of gaining the approval of family, superiors or colleagues. This is also exemplified by a student who engages in learning for the purpose of gaining recognition from family, superiors or colleagues. In order to avoid negative influences such as ‘I don’t want to be seen as a bad student’ or ‘I don’t want to be seen as an incompetent subordinate’. In order to avoid negative repercussions, they are more likely to engage in second language learning. These motivations for foreign language learning. These indicators of motivation to learn a foreign language were proposed by Zoltán Dörnyei in 2005 and have been the main theoretical framework for subsequent motivation research.

This theoretical framework is regarded as the main one for subsequent motivational research. The results of this research will be examined with a focus on the development of these two abilities.

Verification of the development of the L2 self

A survey on the L2 self was conducted using a 10-item questionnaire developed by Dörnyei and Taguchi. The data are presented as the percentage of students who responded in the affirmative to each question. The English Communication II course is a fully elective course, frequently undertaken by students with an affinity for the English language at the Faculty. The mean TOEFL iBT score is approximately 450, with the majority of students having attained the second level of the English Proficiency Test. Moreover, the course is predominantly attended by students who aspire to gain international experience through overseas travel during their undergraduate studies. As evidenced in Table 2, engaging in discourse with international students on topics such as the aging of society and the shortage of caregivers in English, even if only indirectly, has been identified as a significant factor contributing to an increase in the ideal self. However, as Table 2 illustrates, only a small proportion of students expressed a desire to work as nurses abroad in the future. Nevertheless, they do appear to aspire to work and communicate in English. Additionally, they appear to view English as a crucial subject, one that is linked to their future career development. However, it is unclear whether this perception is directly linked to their self-concept. In essence, they appear to view English language learning in a more accessible manner.

With regard to comparisons with previous experimental data, the study could not be conducted because it was not possible to conduct the classes with the same group of students. Therefore, the results of a survey of changes in cognitive ability and L2 self before and after the classes are presented.

Table 2.

L2 Self Development Survey Results

No.	Questions	Pre	Post
1	I can imagine myself living in a foreign country having discussions in English	7.8	10.2
2	I can imagine myself doing my job un English	15.6	17.7
3	I can imagine myself communicating with foreign people in English	21.7	58.3
4	I can imagine myself learning to speak in English	44.3	67.8
5	When I think about my job in the future, I imagine myself speaking in English	8.2	58.3
6	I want to get good grades in English so I study English	53.2	67.8
7	I study English because it is a required subject	64.3	17.7
8	I study English because my friends say it's an important subject	53.2	35.4
9	I study English because I am expected to do so by my parents	15.6	0
10	English is an important subject because it is necessary for upgrading my career	21.7	67.8

Conclusion

It is hypothesised that COIL-type classes utilising VR spaces have achieved a certain level of success. However, as research into the relationship between motivation and EEG is ongoing, it will be necessary to measure not only the development of the ideal self but also learners' EEG and eye tracking biological responses, and to estimate motivation during learning in a more objective manner.

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Students' Perception of the Effects of Using Self-assessment and Peer-assessment in Promoting Learner Autonomy in Speaking Skills

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ABSTRACT

This study aims to examine the effects of self-assessment and peer assessment on learner autonomy development and the different effects between the two kinds of assessment practices in language use, focusing on EFL speaking skills. Eighty-eight first-year non-English majors at VNU-HCM University of Science taking a fifteen-week general English course participated in the study and were put in two groups: experimental 1 (n=49); and experimental 2 (n=39). The participants in experimental group 1 assessed their own work, whilst those in experimental group 2 assessed their peers' work. Quantitative data was collected from students' pre-and post-test questionnaires. Three key findings were revealed. First, through the use of self-assessment, dimensions of initiating, monitoring, and evaluating students' learner autonomy were significantly enhanced. Second, the implementation of peer assessment also considerably promoted students' learner autonomy dimensions by initiating, monitoring, and evaluating. Third, although both self-assessment and peer assessment developed these four learner autonomy dimensions, there is a small difference between the two kinds of assessment on dimension initiating. The effects of self-assessment on dimension initiating surpassed that of peer assessment on dimension initiating.

Keywords: *Learners' autonomy, Self-assessment, Peer-assessment, Speaking Skills*

Introduction

Since the emergence of the learner-centered approach, learner autonomy has been regarded as an essential part of the field of language learning and teaching. According to Phan (2024), autonomous learning significantly influences students' success or failure in the classroom and throughout their learning effort. Although learner autonomy is one of the most important factors leading to students' success in their studies, encouraging students to be autonomous learners is quite challenging in Vietnam. Trinh (2005), Dang (2010), Le (2013), and Tran (2022) acknowledged that Vietnamese students are passive learners and lack critical thinking skills and

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autonomous learning. There are different reasons for this situation, including the teacher-centered approach, traditional learning, and summative assessment method. Among these reasons, the traditional summative assessment method is the main one that prevents students from moving toward autonomous learning.

Lately, alternative assessment (self-assessment and peer assessment) has grabbed the attention of many researchers because of the emphasis on learner independence and autonomy. Andrade & Valcheva (2009) referred to self-assessment as a formative assessment process that offers students the chance to reflect on and evaluate the quality of their performance, identify strengths and weaknesses, and make the next steps for improvements. Peer assessment as learning is referred to as a process whereby students get involved in judging their peers' work by using given criteria and applying standards (Falchikov, 2005, as cited in Karami & Rezaei, 2015).

With my 10-year experience in teaching English at the University of Science, I realized that several teaching and learning-related problems that motivated me to carry out this research include low-level entry, no replacement test before entry, large class sizes, students' lack of awareness of foreign language importance, short study duration and traditional assessment method. The traditional assessment method is considered the most serious problem because it leads to a lack of student assessment skills and wastes teachers' time, especially in speaking skills. After experiencing this problem for a long time, I believed that focusing on the learning process made students motivated and more autonomous and helped teachers save time. Consequently, I decided to conduct my study to find out whether alternative assessment means, namely self-assessment and peer assessment, can help students improve their learner autonomy. In this study, these two alternative assessment methods were applied to investigate their effects on learner autonomy development and compare the different effects between these methods on learner autonomy in speaking skills.

Literature review

Learner autonomy

The Greek word "autonomous," where "auto" means self and "nomos" means law, is the source of the word "autonomy (Ho & Hoang, 2024). According to Little (1991), the term *learner autonomy* was first used by Holec has become a "buzz - word" to various authors in the area of foreign language learning and teaching. Holec (1981) defined LA as "the ability to take charge of one own learning". Littlewood (1996) explained that LA is "the ability and willingness to make choices independently". Lengkanawati (2017) regarded LA as the capacity to control learners' own learning by deciding on their learning objectives, contents, and progress, selecting their methods and techniques, monitoring the acquisition process, and evaluating learning outcomes. Kashefian and Nalini (2020) concluded that LA is not an inborn attribute, so learners have to nurture it through their intent and scientific learning methods. Due to the continuous change in the definition of LA, its dimensions have varied over time. Tassinari (2012, p. 28) stated, "LA is a complex construct, a construct of constructs, entailing various dimensions". As a consequence, in order to get a deeper understanding of this term, LA's dimensions must be identified. Several dimensions of LA are repeatedly identified in different studies. For instance, the dimension *goal-setting* was used by Chan (2000), Reinders (2010), and Dang (2012). Dimension *planning* was used by almost all authors except for Little (2003) and Dang (2012). The dimension *initiating* was included in Little's (2003) and Dang's (2012) studies. Similar to *planning* dimension employment, the dimensions of *monitoring* and *evaluating* can be found in almost all authors above except for Trinh (2005). In the present

study, the researcher employed these five dimensions constructed from the LA definition of Holec (1981). That is the ability to make all the decisions regarding all aspects of learning: *setting goals, planning, initiating, monitoring, and evaluating*.

Speaking skills

Speaking is an important part of learning and teaching a second language. According to Bygate (1987), “Speaking skill is the ability to use oral language to explore ideas, intentions, thoughts, and feelings with other people as a way to make the message clearly delivered and well understood by the hearer.” Kayi (2006) regarded speaking as the process of building and sharing meaning in verbal and non-verbal ways in different contexts. This author also added that a successful language learner is one who has the ability to communicate in a second language clearly and effectively; therefore, it is crucial that language teachers pay much attention to teaching speaking.

Learner autonomy and speaking skills

Various authors have investigated the relationship between LA and speaking skills. Dafei (2007) pointed out that there was a close connection between autonomy and language ability. This author concluded that autonomy may lead to greater proficiency in language use. Nguyen & Nguyen (2023) asserted that learners with lower speaking grades were less autonomous than those with better English-speaking proficiency. Risenberg and Zimmerman (1992, as cited in Dafei 2007) also stated that the students with high degrees of LA tended to achieve higher scores, while the ones with low degrees of LA might get low scores.

Self-assessment as learning

The term SA has been defined by many authors recently. Bourke & Mentis (2011 as cited in Ndoye, 2017) described SA as a process where students get engaged in setting goals, regulating, and reflecting on their learning by evaluating their performance. After understanding the criteria based on the learning goals, students evaluate their performance and then make plans for further improvement. As Rourke (2013 as cited in Thawabieh, 2017) stated, SA is the ability to monitor students’ learning process effectively, provide suitable feedback, and enhance their self-learning, making them autonomous learners.

Peer-assessment as learning

Strijbos and Sluijsmans (2010) defined PA as a process where students judge their peers’ performance, reflect, discuss, and collaborate. In agreement with Strijbos & Sluijsmans (2010), Sebba et al. (2008, as cited in Memiş & Seven, 2015) generalized that peer assessment is considered as the ability to assess each other’s work through reflection on the learning goals and how to achieve them. In the same vein, Robert (2006 as cited in Karami & Rezaei, 2015) declared PA as the process of reflecting on peers’ learning performance and suggesting grades for it.

The relationship between learner autonomy and alternative assessment

The relationship between learner autonomy and self-assessment

Over the past few decades, SA as learning has been proved to be an integral part of LA. Gardner (2000) claimed that SA is a contributing factor in helping students become responsible for their learning. It is because SA practice offers learners opportunities to reflect on and assess their performance, making them actively engage in their learning process. Additionally, Gholami (2016) stated that SA positively impacted students’ ability to evaluate and assess their performance and motivation. Ngo (2020) concluded that SA and reflection activities in listening

and speaking skills can be utilized to help students evaluate their performance and become autonomous learners. Phan (2021) also suggested that SA might be a useful operational approach for developing language learner autonomy in Vietnam and any other similar settings.

The relationship between learner autonomy and peer-assessment

According to Saito (2008), in the PA process, learners can promote their critical reflection through the observation of their partners' performances and being aware of performance criteria in the PA process. Moreover, Shams and Tavakoli (2014) accepted that when learners notice their peers' strengths and weaknesses and then compare them with theirs, they can promote their own learning, enhance critical thinking, and foster learner autonomy. Evidently, comparing their own strengths with those of their peers encourages learners to make more efforts to improve themselves. These two authors also emphasized that despite students' worries and concerns during their PA process, they can become fully aware of their own learning, recognize the differences between their own perception and their peers, and finally take control of their learning.

Comparing the effect of self-assessment and peer assessment on learner autonomy

Liao (2023) stated that using both SA and PA improved learners' LA by monitoring their learning process. Several researchers have proved that the effects of SA are greater than those of PA, whereas others have pointed out that PA's effects are more significant than those of SA.

The effect of PA has been proven to be less significant than that of SA due to some factors. The first factor making the effect of PA less considerable than that of SA is the assessors' level of lenience or severity. According to Ashraf & Mahdinezhad (2015), in practicing PA, students tend to give the same mark or score to any peers with whom they work. Also, students tend to be reluctant and anxious to indicate their peers' weaknesses since they want to avoid obvious criticism. PA is undoubtedly an effective tool to increase students' LA if it is conducted in the right way. With a lack of feedback quality of PA, the effectiveness of PA is limited.

Another factor that makes the effect of PA less significant than that of SA is the friendship bias. When comparing the effect of SA and PA, Farrokhi et al. (2012) concluded that students appear to assess their peers in a more biased way than they assess themselves. The implementation of PA was also found to be affected by friendship bias in the classroom by Amalia Izati (2018). This author stressed that friendship bias occurs during the PA process due to some factors: confidence, feelings, and willingness of assessors. Indeed, the implementation of PA experiences friendship bias, compared to SA implementation, which asks students to assess their own work. Once judging skills have been affected during PA activities, the assessors' reflection skills will not be developed, which cannot help students promote their LA. It can be seen that the effect of SA is greater than that of PA in terms of friendship bias. According to Phan (2021), students think that they have a low level of expertise, which prevents them from providing answers with a high level of reliability when doing PA practices. Therefore, in spite of accepting PA, they have more belief in the accuracy of their teacher feedback. Nowrozi Larsari and Sadegh Oghli (2016) asserted that SA had a more significant impact on Iranian EFL learners' LA compared to PA because SA could give students more motivation and lower tension.

However, the effect of SA is thought not to be as great as that of PA owing to several factors. Firstly, when doing SA, students assess their own performance, so they will be less responsible for the assessment activity. Therefore, they tend not to take the assessment seriously, leading to their surface-level study (Butler & Lee, 2010; Dann, 2002 as cited in Ashraf & Mahdinezhad, 2015). It is further explained that with the behavior of not undertaking the SA seriously, self-

assessors will lack feedback, compared with peer-assessors, and this leads to the limited effectiveness of SA (Butler & Lee, 2010; Black & William, 1998 as cited in Ashraf & Mahdinezhad, 2015). Karakaya (2015) also posited that self-assessors are not as strict as peer-assessors. In the same vein, Lin et al. (2001) pointed out a possible reason for the difference between the effects of SA and PA, which is that SA is based on a scoring standard that is not stricter than PA. The second factor that makes SA less effective than PA is a lack of an interactive, competitive, cooperative learning environment during the assessment activities. In SA, students only learn from their own judgment since they do not have the chance to learn from their peers (Ashraf & Mahdinezhad, 2015). It is apparent that self-assessors cannot recognize their own mistakes easily, which lessens the effectiveness of self-assessment. In addition, with a lack of an interactive learning environment, when undertaking SA, the students do not have the chance to observe their peers' work to compare with theirs. With this demerit, the students hardly come up with new ideas, learn from their peers' strengths, avoid weaknesses, and make more improvements (Chen, 2010; Chang et al., 2012, as cited in Khonbi & Sadeghi, 2013). Further, SA activities cannot offer students a competitive learning environment where they have the opportunity to make more progress and produce better work by keeping track of their peers' learning outcomes. This will limit the students' in-depth study and LA ability as well.

Research Questions

The present study aimed to answer the following research questions:

- 1. To what extent does students' self-assessment in EFL speaking skills affect their learner autonomy development?*
- 2. To what extent does students' peer assessment in EFL speaking skills affect their learner autonomy development?*
- 3. To what extent is self-assessment different from peer assessment in EFL speaking skills in triggering effects on students' learner autonomy development?*

Methods

Pedagogical Setting & Participants

Eighty-eight participants from two intact general English-2 classes at Ho Chi Minh City University of Science were conveniently taken from the population of about 800 first-year students who took general English 2. These two classes had an equal chance to be chosen for experimental group 1 and experimental group 2. The experimental group 1 (self-assessment group) was the class coded 17 KVL3 and the experimental group 2 (peer-assessment) was 17 DCH1.

Experimental procedures

The experimental procedures of this study include choosing teaching materials and teaching method; designing speaking tasks and choosing interaction patterns for speaking tasks; Designing SA and PA forms and training students to give feedback themselves and peers feedback based on SA and PA forms.

During the learning course, students were required to practice 25 speaking tasks. Students completed 2 speaking tasks each week except for the ninth and fifteenth weeks. In the ninth week, the students practiced only one task because they took a mid-term test, and due to the revision activity, the students did not practice any task in the fifteenth week. The speaking tasks

used similarly in 2 classes were mostly taken from the speaking sections in modules 9-15 of the "New Cutting Edge" coursebook and the teacher's book.

SA and PA activities were conducted after speaking tasks. Each of the SA and PA activity lasted about 5-7 minutes. During the learning course, the students were required to complete 25 self-assessment forms (SA group) or 25 peer-assessment forms (PA group). Students could complete the assessment forms in either Vietnamese or English, but in order to practice their writing skills, they were encouraged to accomplish the forms in English.

The researcher first introduced the students a speaking task including the topic, roles, context, objectives, and duration with some useful language for each speaking activity. Next, the students were informed of the important elements of a good oral performance, the assessment rubric, the format and purpose of assessment form which they would complete after the finished speaking task.

The students were given 10 minutes to complete this task in pairs. After that, the researcher chose two volunteer students to perform their work in front of the class. After the performance, the researcher instructed students on how to use the assessment rubric to assess the performance and then modeled giving feedback on the performance by the two volunteer students. At this point, the teacher ensured that the students could understand how to assess the performance.

For further practice, other two volunteer students were invited to perform in front of the class. The students were given 5-7 minutes to familiarize themselves with the assessment form by giving feedback based on the assessment rubric. After that, the researcher collected some of the students' assessment forms to judge whether they gave feedback correctly or not and discussed students' issues or concerns regarding self-and peer assessment practice.

Design of the Study

In this quasi-experimental study, the pre-post questionnaires were used for both groups at the beginning and end of the course to investigate the impact of SA and PA on students' LA development and compare the different impacts of these assessment practices on LA development. The questionnaire was designed in both English and Vietnamese.

Data collection & Analysis

After getting approval from the Board of Administrators of the Foreign Languages Center in HCMC US, the researcher met the two classes and told them about the purpose and procedure of the research in the first week. The students in these two classes agreed to take part in the study voluntarily. At the beginning of the first class meeting in week 1, eighty-eight students of both groups were given a pre-test to measure their learner autonomy level. In order to get reliable and valid information from the participants, the researcher explained the purpose of the pre-questionnaires, the way to complete them, and some difficult terms in the questionnaire. After the explanation, the participants completed the questionnaires for 30 minutes. After that, all of the questionnaires of 88 students from two classes were collected for data analysis.

So as to see the difference in the effects of SA and PA implementation on learner autonomy after the course, the post-test questionnaire was administered in week 15. The administration procedure was the same for the pre-test and post-test questionnaires. The eighty-eight students who completed the pre-test questionnaire were asked to do the post-test questionnaires. However, only 69 questionnaires were selected for further analysis since 22 out of 88 participants could not follow the training strictly. During the training course, each participant was required to finish 25 SA forms (SA group) and 25 PA forms (PA group). In both groups, those who completed over 18 forms (70 % of the total), their questionnaires were collected for

further analysis. The 69 valid questionnaires were collected for data analysis.

After the reliability of the questionnaire had been checked, eight out of thirty-eight items were removed to ensure the highest reliability level of the questionnaire. Data from the thirty remaining items in the questionnaires were computerized and analyzed by the Statistical Package for the Social Sciences (SPSS) program.

To answer research questions 1 and 2, a paired sample T-test was run within experimental group 1 (SA) and experimental group 2 (PA) to know how undergraduate students' SA and PA in EFL speaking skills impact their LA development. To answer question 3, an independent sample T test of both experimental group 1 and experimental group 2 for the post-test was run to see what extent SA is different from PA in triggering effects on learner autonomy.

Results/Findings and Discussion

RQ1: To what extent does students' self-assessment in EFL speaking skills affect their learner autonomy development?

Table 1

Results of Independent samples t-test analysis for five dimensions of LA (pre-questionnaires)

	Group	N	P
D1. Goal Setting (Pre-test)	SA group	36	.108
	PA Group	33	
D2. Planning (Pre-test)	SA group	36	.800
	PA Group	33	
D3. Initiating (Pre-test)	SA group	36	.992
	PA Group	33	
D4. Monitoring (Pre-test)	SA group	36	.294
	PA Group	33	
D5. Evaluating (Pre-test)	SA group	36	.309
	PA Group	33	

Table 1 shows the results of the independent sample T-test analysis for five dimensions of LA in 2 groups' pre-test questionnaires. As presented in this table, the pre-test scores of five LA dimensions of the two groups are not statistically different ($pD1=.108$, $pD2=.800$, $pD3=.992$, $pD4=.294$, $pD5=.309$, respectively). Consequently, it could be concluded that there was no statistically significant difference in students' learner autonomy dimensions of the SA group and PA group before the treatment. This conclusion was to make it conducive to any further conclusion about the effect of SA and PA on LA dimensions and the different effects of SA and PA on LA dimensions.

Table 2 illustrates the results of the paired sample T-test for LA dimensions in the SA group. As could be seen from the table, a statistically significant difference between the pre-test and post-test was found in the last four dimensions ($pD2,3,4,5 < 0.05$) but not in the first dimension ($p > 0.05$).

Table 2

Results of Paired samples *t*-test analysis for LA dimensions (SA Group)

	Dimension	Variable	M	p
SA Group	D1. Goal-setting	Pre-test	2.989	.060
		Post-test	3.294	
	D2. Planning	Pre-test	2.094	.000
		Post-test	2.622	
	D3. Initiating	Pre-test	2.482	.000
		Post-test	3.463	
	D4. Monitoring	Pre-test	2.343	.000
		Post-test	3.071	
	D5. Evaluating	Pre-test	2.467	.000
		Post-test	3.472	

On the other hand, the finding of this current study is not in line with the one of Ashraf & Mahdinezhad (2015), who stated that SA had no effect on the development of LA in speaking skills since the students did not do SA activities seriously. This author's conclusion confirmed the view held by several researchers that SA had no effects on LA. According to Birjandi and Tamjid (2010), "self-assessment is performed through complex cognitive processes which are affected by many uncontrollable factors, " making this method less effective. Similarly, Butler & Lee, 2010 and Dann, 2002, as cited in Birjandi and Tamjid (2010) argued that not taking the SA practice seriously causes students to just gain surface-level study.

The answer to research question 1 in this study indicated that the use of SA cannot help increase goal-setting ability. The theory of goal-setting and some empirical research can explain this finding. Haynes (2011) stated that goal-setting allows students to self-manage their own learning process through identifying targets. Dornyei (1994, as cited in Haynes, 2011) also explained that satisfaction from achieving goals can motivate students and develop their self-confidence and efficacy. However, several factors need to be considered to develop learner autonomy through goal setting. Latham and Locke (2006, as cited in Huei-Ju, 2018) identified four facilitators for maximizing the effects of goal-setting, namely "(1) feedback; (2) commitment to the goal; (3) task complexity; (4) situational constraints".

This result revealed that SA significantly affected the last four dimensions of LA. This finding is in line with Gholami's (2016) statement that the use of SA cannot foster all dimensions of learner autonomy. In Gholami's study, SA was identified to help develop four out of nine dimensions of LA: "importance of classroom and teacher, role of the teacher, objective/evaluation and assessment/motivation". The finding of the current study is similar to that of Gholami (2016) in that SA can foster the evaluating dimension in both studies because it is a core aspect of assessment. Also, these results align with the conclusion Juaythin (2017) reached that response journals can develop some aspects of LA. In Juaythin's study (2017), response journals are found to have effects on three aspects of LA, including students' self-awareness, self-recognition, and self-reflection.

RQ2: To what extent does students' peer assessment in EFL speaking skills affect their learner autonomy development?

Table 3

Results of Paired samples t-test analysis for LA dimensions (PA Group)

	Dimension	Variable	M	P
PA Group	D1. Goal-setting	Pre-test	3.291	.265
		Post-test	3.170	
	D2. Planning	Pre-test	2.133	.000
		Post-test	2.770	
	D3. Initiating	Pre-test	2.480	.000
		Post-test	3.066	
	D4. Monitoring	Pre-test	2.468	.000
		Post-test	3.047	
	D5. Evaluating	Pre-test	2.606	.000
		Post-test	3.212	

Table 3 presents the results of the paired sample T-test for LA dimensions in peer-assessment groups. From the table, a statistically significant difference between the pre-test and post-test was found in the last four dimensions ($p_{D 2,3,4,5} < 0.05$) but not the first dimension ($p > 0.05$).

This finding revealed that PA had a considerable effect on the last four dimensions of LA. This seemed to be in line with Cheng and Warren (2005), who found a positive effect of integrating PA into English language programs in LA. Also, these results are backed by Yinjaroen and Chiramanee (2014), Yang et al., (2006), and Yinjaroen and Chiramanee's (2014) view that the use of PA can help students take responsibility in considering and evaluating both the learning process and the product of their peers, facilitate interactions among students and develop students' skills in assessing their peers.

Nevertheless, the findings of this study are different from the ones reported by several previous studies, which show that the effect of PA is limited. Landry et al. (2015) confirmed that when students evaluate their peers' work, they tend to give higher scores to those who like it even though their peers' performances are not worth receiving such good grades. Therefore, biased assessment due to the friendship can be found in implementing this kind of assessment. Similarly, Tsui and Ng (2000) discovered that learners found peer feedback ineffective, and they highly valued their teacher's feedback instead of their peers. Phan (2021) concluded that students did not find PA effective because they did not believe in all degrees of their assessment accuracy.

RQ3. To what extent is self-assessment different from peer assessment in EFL speaking skills in triggering effects on students' learner autonomy development?

Table 4

Results of Independent samples t-test analysis for five dimensions of LA (post-questionnaires)

	Group	N	M	p
D2. Planning (Post-test)	SA group	36	2.622	.450
	PA Group	33	2.770	
D3. Initiating (Post-test)	SA group	36	3.463	.032
	PA Group	33	3.066	
D4. Monitoring (Post-test)	SA group	36	3.071	.896
	PA Group	33	3.047	
D5. Evaluating (post-test)	SA group	36	3.472	.094
	PA Group	33	3.212	

Table 4 shows the results of Independent samples t-test analysis for four dimensions of LA in post-test questionnaires. The analysis revealed that there was a statistically significant difference between the effects of SA and PA on learner autonomy dimension 3 ($p=.032$), whereas no statistically significant difference between the effects of these assessment methods was found on dimensions 2, 4 and 5 ($p>.05$). A close look at Table 4 indicated that the mean score of SA group is higher than that of PA group in initiating dimension ($M_{self} = 3.463$ and $M_{peer} = 3.066$, respectively). It can be understood that the effect of SA is higher than that of PA on the initiating dimension.

The results showed that there was no difference in the effects of SA and PA on dimensions 2, 4, and 5 (planning, monitoring, and evaluating, respectively). Meanwhile, a significant difference between the effects of these assessment methods on dimension 3 (initiating) was found. To be more specific, the effect of SA is higher than that of PA on one of four dimensions of learner autonomy, i.e., the initiating dimension. This finding is partly in line with that of Nowrozi Larsari and Sadegh Oghli's (2016) study, which found that SA had a more substantial effect on LA in general than PA. The researchers of this study concluded that by integrating SA activities into daily English language teaching instruction, students can gain a deeper understanding of the expected learning result, look for their strong and weak points, and set goals for improvement in the future. These results are backed by Bound (1995), Harris (1997), Gardner (1999), and Warchulski's (2016) view that SA is a powerful tool that helps learners become autonomous through the process of self-reflection.

Both the current study and Nowrozi Larsari and Sadegh Oghli's (2016) found a more significant effect of SA on learner autonomy than PA. However, the present study found the different effects between SA and PA on only one dimension of LA, namely initiating. It can be obvious that the findings of the current study are clearer.

On the contrary, the results of the current study did not align with those of Ashraf and Mahdinezhad (2015). These two authors concluded that the participants in the PA group outperformed those in the SA group, showing the positive effect of PA on LA and speaking skills. The findings of these two authors indicated that students can learn more from their peers than from judging themselves. To most students, noticing mistakes from others' work is easier than noticing them from their own. Ashraf & Mahdinezhad's (2015) conclusions are backed by the view of some authors (Blanche & Merino, 1998; Oscarson, 1997; Ross, 1998 as cited in

Ashraf and Mahdinezhad, 2015) that PA helps students to have more in-depth study because this kind of assessment creates a competitive learning environment among students where they are willing to assess their peers' work as accurately as possible.

The current study's result showed that PA's effect on the initiating dimension of learner autonomy is lower than that of SA. As discussed by various authors, PA has numerous advantages in language learning and teaching. However, many PA technique-related issues have been discovered lately, and one of the most obvious issues is the reliability of PA. According to Haas et al., (1998), it is suggested by the literature that peer-ratings may not be as accurate as self-ratings. This may be because peers find criticizing their friends difficult (Falchikov, 1995 as cited in Patri, 2002). From the assumptions above, it can be understood that under-rating brings students more benefits than over-rating. One of these effects might develop students' ability to look for opportunities to study more.

Conclusion

Self-assessment and peer-assessment practice significantly enhanced students' learner autonomy dimensions 2, 3, 4, and 5 (planning, initiating, monitoring, and evaluating, respectively). The employment of SA and PA did not change students' goal-setting skills because this skill belongs to thinking or awareness, which needs a long time to improve. With a four-month period in this study, it was obvious that students did not have enough time to practice the skill of goal-setting. This is a striking contribution of this study to the literature because very few studies have investigated the effect of SA and PA on each dimension of LA.

Also, two kinds of practice significantly improved students' LA dimensions 2, 3, 4, and 5 (planning, initiating, monitoring, and evaluating, respectively), but the effect of self-assessment outweighed that of PA on initiating dimension of students' learner autonomy, and the difference was statistically significant. This is the most notable contribution of this study to the literature since there have been no studies comparing the effect of SA and PA on each dimension of LA. This finding helps those teachers who waver between SA and PA have a suitable choice. Teachers who tend to focus on developing the initiating ability are recommended to use the SA technique as its effect is more significant than that of the PA technique.

The present study was thoroughly designed, and careful consideration was given to other issues related to the study. However, there are still several limitations that can be solved in further research. The first limitation is that the random assignment of subjects to the SA group and PA group was impossible because it was predetermined by the university administrations and the registration of the students. Thus, the generalization to the population of the study is limited. The second one is that the sample size for this study was small, with only 88 participants for both experimental groups. The third one is the limited time required to conduct the experiment. Accordingly, the present study's findings could not be used to guarantee a longer implementation of SA and PA with the same results in terms of their effect on various samples in different learning environments.

Some recommendations for further research are discussed as follows. The first recommendation is about the sampling method. Future researchers will apply the random sampling method to increase the possibility of achieving more generalized results. The second one is that further studies should be implemented with a larger population in different levels and contexts so that the generalization will not be restricted. The third one is the time for the implementation of SA and PA in developing LA. It is strongly recommended that further research should be carried out over a longer period. The fourth one relates to the types of speaking activities for

assessment. In this study, only pair-work speaking activities are mostly used for SA and PA practice. Hence, future researchers should use activities in individual and group work for these kinds of assessment practices. The final one is that most researchers normally use both questionnaires and assessment forms in their studies, but did not take assessment forms for analysis, as did the current study. Thus, to better understand the effects of SA and PA on learner autonomy development, further researchers should analyze assessment forms. All in all, LA development is a complicated process that takes a great deal of time and effort. Both teachers and students need to be patient. Besides language education, SA and PA can be applied to other subjects in sciences, humanities, and other education levels before university.

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Biodata

Since joining the VNUHCM-University of Science, Thao Phan has been involved with studies related to English language teaching. Before joining the university, Phan worked as a visiting lecturer of English at several universities. Since 2021 Phan worked as a full-time lecturer of English at VNUHCM-University of Science, Ho Chi Minh City.

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