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The effects of technology-assisted tasks on students' affect and autonomy: a case study in EFL speaking classes in Vietnam

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Abstract

Technology is believed to play a positive role in assisting language learners to enhance not only their language proficiency but also their self-directed learning abilities. This study investigates the effects of technology-assisted tasks on EFL students' affect and autonomy in a speaking course. Adopting a mixed-methods approach, the study involved 80 first-year English majors at a public university in central Vietnam to explore their perceptions of the impacts of technology-assisted tasks on their affect and autonomy in speaking practice. Data collected from an online survey and post-survey interviews revealed that most students appreciated the positive effects of engaging in technology-assisted tasks on their learning affect, as it made them more motivated, confident, and less anxious in practicing speaking English, thereby improving their speaking skills. Regarding their autonomy, students reported that fulfilling technology-assisted tasks helped them set goals for their self-practice, manage their out-of-class self-study, and develop reflection skills to improve their speaking weaknesses. These findings suggest that adopting technology-assisted tasks can be an effective formative assessment activity, applicable not only to first-year English majors but also to students in other foreign language speaking courses.

Keywords: Technology-assisted tasks, Speaking skills, EFL students, Affect, Autonomy

Introduction

Speaking skills play a significant role in language learning, serving as a cornerstone for successful language acquisition (Amoah & Yeboah, 2021). English speaking proficiency is also believed to be an important target that students should achieve to be able to communicate effectively in the era of globalization, where English is a lingua franca. Practice is crucial in developing students' speaking performance because producing language output in spoken form allows them to enhance their fluency and accuracy (Swain, 1985). However, there is a fact that English-as-a-Foreign-Language (EFL) students often face significant challenges in practicing speaking skills during class (Nuraini, 2016; Tran & Dang, 2019). These challenges include large class sizes, which limit individual speaking opportunities (Bhutto et al., 2023), and psychological barriers such as anxiety and reluctance to speak, which further inhibit participation and progress (Arifin, 2017; Suparlan,

2021). To address these issues, encouraging out-of-class speaking practice is believed to be a necessary part of EFL speaking courses (Coşkun, 2016).

The advent of technological development has provided important support and enhancement in language learning, especially speaking skills (Nguyen et al., 2022). The utilization of different technological tools to practice speaking skills outside of class time can be a viable solution to help EFL students overcome the above-mentioned challenges in speaking classes (Dincer, 2020). Ramadhan et al. (2023) noted a growing adoption of online task-based language learning, which not only improves students' skills but also enables them to take initiatives in organizing, completing tasks, and tracking their learning progress independently. Teachers can also benefit from technology by adopting different tools in delivering speaking tasks and collecting students' speaking performances, marking them, and providing feedback on students' speaking performance. The use of learning management system (LMS) platforms, for example, can support teachers in implementing task-based learning activities (Cao et al., 2024).

One of the ways technologies can be employed to facilitate students' speaking practice is the use of video-recording tasks (Pham & Le, 2023; Tukan, 2024). Recording themselves speaking in front of an electronic device such as a mobile phone allows students to practice speaking in a less pressured environment, providing them with opportunities for repeated practice, self-assessment, and reflection. Previous studies have shown that using video recording to practice speaking is effective in terms of enhancing students' speaking performances, enabling them to review and refine their language use independently (Menggo et al., 2022; Putri & Rahmani, 2019). Despite the recognized benefits of technology-assisted tasks in language skill development, there is limited empirical research on how these tasks impact students' affect and autonomy. This study aims to bridge this gap by investigating the effects of technology-assisted tasks as part of formative assessment on EFL students' affect and autonomy in a speaking course. By exploring how such tasks influences students' enjoyment, willingness and self-regulation, this research hopes to highlight the potential of technology-assisted tasks as a formative assessment activity to enhance not only language proficiency but also the intrinsic motivation and self-directed learning abilities of EFL students.

Literature review

Speaking skills in the EFL context

In the EFL context, speaking skills refer to the ability to effectively communicate orally in English. This involves not only the correct use of grammar and vocabulary but also the ability to convey meaning clearly, fluently, and appropriately in various situations (Amoah & Yeboah, 2021). Among four English skills (i.e., listening, speaking, reading, and writing), speaking is often considered the most significant one as it is assumed that a successful English learner can speak fluently. Despite its significance, speaking is usually perceived to be more challenging than the other three skills because of its complexity (AlSaqqaf et al., 2024). EFL students' successful speaking performance encompasses various linguistic and non-linguistic aspects that together ensure their effective communication (Dewi & Wilany, 2022; Kang & Yan, 2018). These aspects include pronunciation, fluency, use of grammar and vocabulary, coherence and cohesion, interactive

communication, as well as non-verbal language including gestures, facial expressions, and eye contact (Ferginan et al., 2025).

The Output Hypothesis, proposed by Swain (1985), emphasizes that producing language is crucial for language acquisition. For this reason, practice plays a vital role in developing speaking skills. According to Swain (1985), meaningful speaking practice pushes learners to process language at a deeper level, thereby enhancing their linguistic competence. When students actively engage in speaking, they not only practice retrieving and using vocabulary and grammatical structures but also notice gaps in their knowledge, which can prompt further learning and refinement. Regular speaking practice enables learners to experiment with language, receive immediate feedback, and make necessary adjustments, fostering better pronunciation, fluency, and accuracy (Derakhshan et al., 2016). Interaction during speaking practice also allows students to develop conversational skills such as turn-taking and responding appropriately (Mustakim et al., 2025). Therefore, consistent practice is indispensable for EFL learners to improve their speaking skills and achieve communicative competence.

Task-based learning in speaking instruction

Task-based language learning (TBLT) has gained prominence in language instruction (Ellis, 2009; Nunan, 2004), particularly in speaking classes (Albino, 2017; Ulla, 2020). A task, as defined by Willis (1996), is an activity in which learners use their language skills to achieve a meaningful outcome. Similarly, Ellis (2003) views tasks as any activity that contributes to language development, ranging from simple exercises to complex simulations and decision-making tasks. TBLT is valued for its ability to promote authentic communication and foster language acquisition by actively involving students in real-world language use (Mulyadi et al., 2021). Ellis (2003) and Willis and Willis (2007) proposed a three-stage task implementation procedure including pre-task, task, and post-task. In speaking instruction, the pre-task phase involves setting clear goals, providing input, and ensuring students understand what is expected. During the task phase, students engage in individual, pair, or group activities where they use the target language to complete communicative tasks, often followed by reporting their results. Finally, the post-task stage focuses on teacher feedback, student reflection, and language analysis, helping learners recognize key vocabulary, grammar structures, and areas for improvement.

Challenges faced by EFL students in speaking classes

Despite the significance of speaking skills and regular speaking practice in language acquisition, many factors can limit learners' speaking practice within the traditional classroom. In addition to language-related difficulties such as limitations in vocabulary, grammar, or pronunciation, learners also encounter many other non-linguistic difficulties (Le et al., 2024; Tran & Dang, 2019). One of the first impacts is class size. Currently, in EFL classes in some Asian contexts like Vietnam, class sizes are often large (up to more than 40 students per class), which can cause many obstacles for students in practicing speaking skills (Le et al., 2024). Large class sizes make it difficult for teachers to organize speaking activities and give feedback to each student to help them realize the problems they face when speaking English (Bhutto et al., 2023). In addition, class time

at tertiary levels is often limited, usually 90–100 min per weekly class; thus, students do not have many opportunities to practice with the guidance of the teacher or collaborate with other students in the class (Alvarez et al., 2024; Le et al., 2024). The difference in level between students in the class can also affect the organization of learning activities in speaking courses (Hordiienko & Lomakina, 2015). Specifically, students with poor English proficiency may have more difficulties performing speaking tasks than students with better English proficiency. Besides, students' anxiety is also a psychological barrier that limits learning speaking skills in class. Previous studies have shown that foreign language learning anxiety (FLLA) can affect students' attitudes, making them feel uncomfortable during speaking classes in class as well as limiting their ability to develop speaking skills (Arifin, 2017; Le et al., 2024; Suparlan, 2021; Tran & Dang, 2019). These obstacles together may hinder students' opportunities to develop their speaking skills and affect their learning motivation if speaking activities only occur in the restricted boundary of brick-and-mortar classrooms.

The role of affect and autonomy in EFL speaking skills development

From the challenges mentioned above, two important aspects that need to be considered to promote students' speaking skills are helping them overcome affective barriers and enhance their self-regulated learning ability outside the classroom. These two respects will be further discussed concerning speaking skills development in the EFL context.

From Dörnyei's (2005) perspective, affect plays a central role in second language acquisition as it encompasses learners' emotional and psychological states that directly influence their language learning behaviors and outcomes. Specifically, he highlights three critical dimensions of affect: motivation, which drives learners' effort and persistence; anxiety, which can inhibit performance and participation; and confidence, which fosters willingness to communicate and take risks in using the target language. By framing affect in this way, Dörnyei emphasizes the dynamic and multifaceted nature of learners' affect, suggesting that successful language learning requires not only cognitive and linguistic development but also the management of learners' affective experiences. The Affective Filter Hypothesis, proposed by Krashen (1982), defines the "affective filter" as a mental barrier that can block language input from being processed efficiently if a learner is experiencing negative emotions. Specifically, Krashen (1982) assumes that high anxiety can raise the affective filter, making it harder for students to absorb and process new language input. Therefore, lowering the affective filter through positive emotional experiences can enhance motivation and self-confidence, facilitating better language acquisition (Amoah & Yeboah, 2021; Tran & Dang, 2019). If students are provided with a less intimidating environment to practice and review their speech in private, it can help lower anxiety levels, reduce the affective filter and make it easier for students to process and produce language (Mustakim et al., 2025). Moreover, regular speaking practice can boost students' self-confidence. As they become more comfortable with speaking, their confidence in using English in real-life situations can also improve. In the end, the ability to see their progress over time through regular practice can motivate students to continue practicing and improving their speaking skills (Coşkun, 2016).

Furthermore, to boost students' out-of-class speaking practice, learner autonomy is significant and is one of the factors that contribute to determining learning effectiveness

(Yildiz & Yucedal, 2020). Learner autonomy is understood as the ability of learners to self-direct and control their learning process (Benson, 2016; Little et al., 2017). Holec (1981) defines learner autonomy as learners' ability to take charge of their learning. While goal-setting and self-management are often discussed in relation to autonomy, recent scholarship highlights the need to distinguish between autonomy and self-regulation. Autonomy refers to learners' agency over their own learning, the capacity to make choices and take responsibility, whereas self-regulation refers to the strategic control of cognitive and metacognitive processes used to achieve those goals (Benson, 2016; Little, 2020). Autonomous learners can set specific goals for their speaking skills based on their personal interests and needs (Little, 2020). For instance, learners might aim to improve their fluency in casual conversations, enhance their ability to give presentations or work on pronunciation for clearer communication. By defining these objectives, learners create a roadmap for their speaking practice. Moreover, autonomous learners can select and adapt learning strategies that best suit their personal needs and learning context (Benson, 2016). This includes choosing the right resources, deciding on study techniques, and knowing when and how to seek help from others, like teachers or peers. An essential aspect of learner autonomy is the ability to self-assess and evaluate one's progress. This involves regularly reflecting on achievements and areas that need further improvement. For example, after completing a speaking task, an autonomous learner would reflect on the outcome, identify mistakes or gaps in knowledge, and adjust their goals or strategies accordingly. This self-evaluation process helps learners take responsibility for their learning outcomes and continuously improve (Benson, 2016; Holec, 1981).

Developing speaking proficiency often requires a lot of time and effort on the part of the learner. As the class time and learning environment in the physical classroom are limited and insufficient for learners to effectively acquire and produce language, learners need to spend an extra amount of time studying and practicing outside of class to improve their speaking skills (Coşkun, 2016; Dincer, 2020). Speaking teachers, therefore, need to enhance learners' sense of autonomy so that they can promote their proactive role in the learning process (Qamar, 2016). Teachers can support learners to transition from dependence on teachers to autonomy in learning by helping them develop the ability to set goals for their practice, self-manage their learning as well as self-assess their speaking performance (Nguyen et al., 2022; Pham & Nguyen, 2021).

Technology-assisted speaking tasks

Technology has played a transformative role in the evolution of task-based language teaching (TBLT) in foreign and second language education (Xue, 2022). Lai and Li (2011) emphasize that technology can essentially contribute to both the conceptualization and implementation of task-based methodologies. This integration has led to the emergence of technology-assisted task-based learning, also referred to as technology-mediated task-based learning (González-Lloret & Ortega, 2014) or technology-enhanced task-based language teaching (Mulyadi et al., 2021), which highlights the use of technological tools as integral platforms for designing, delivering, and completing tasks, making language learning more interactive, accessible, and effective. The limitations of teaching and learning English speaking skills in traditional classrooms can be solved through

the application of technology-assisted speaking practice (Chau, 2021; Nguyen & Pham, 2022; Parveen, 2016).

Technology-assisted tasks can benefit students' speaking practice in various aspects. First, technology can help personalize students' self-study activities. Personalization of students' self-study process is shown in the fact that they can easily use technology tools to practice speaking skills as well as build knowledge of English based on their current level of proficiency, acquisition pace, and learning style (Yahya et al., 2019). In addition, students can practice speaking anywhere and anytime when it is convenient, broadening their speaking opportunities beyond the boundary of the classroom. This benefit of using technology can help solve difficulties related to large class sizes, limited practice time in class, or level differences between students in the class. More importantly, actively practicing speaking with electronic devices can also help students, especially those who lack confidence and feel nervous when speaking in front of a crowd, practice speaking English in a more comfortable environment. This helps reduce students' affective barriers and helps them gradually become more confident with their English-speaking skills (Chen, 2024).

Among various technological advancements that can assist students in developing their speaking skills, videos can be said to be one of the most versatile and effective tools (Dang et al., 2022; Muslem et al., 2017). Videos have emerged as a valuable technological tool that serves as rich multimedia resources, providing diverse input that supports the teaching and learning process (Bajrami & Ismaili, 2016). Besides utilizing the available videos shared on the Internet as teaching materials, requiring students to record videos, especially in speaking activities, has been widely adopted by EFL teachers across various settings (Belmekki, 2023; Pham & Le, 2023; Rosevinda & Bitu, 2019; Sakina et al., 2024; Tran & Nguyen, 2021). By engaging students in video-recording tasks, teachers can foster an interactive and engaging learning environment that extends beyond the classroom. This practice allows students to demonstrate their speaking abilities and reflect on their progress by creating tangible technology-assisted speaking products.

Previous studies and research gaps

The use of video recording for speaking tasks has been associated with several positive outcomes, particularly in the development of speaking skills such as accuracy and fluency. Rosevinda and Bitu (2019) conducted a study to investigate students' perceptions of using video recording to improve their speaking skills. Utilizing a mixed-method approach, the study employed pre-tests and post-tests analyzed quantitatively through paired t-tests, alongside structured interviews to gather qualitative data. The results indicated a significant improvement in students' speaking abilities, with notable enhancements in accuracy and fluency. Students also expressed positive perceptions of video recording, finding it an engaging method to practice speaking. Belmekki (2023) further investigated the impact of self-video recordings on speaking skill development among engineering students. The quasi-experimental study involved pre-and post-tests, with data analyzed using descriptive and inferential statistics. The results revealed a positive effect of self-video recording on students' speaking skills. This study recommends incorporating self-video recording into teaching practices to enhance speaking skills, and it encourages exploring other ICT tools for language learning. Similarly, a study by Sakina et al. (2024) examined the effectiveness

of video-recorded speaking tasks among tenth-grade vocational school students in Indonesia. Using a quasi-experimental design, the study divided 30 students into experimental and control groups, administering pre-tests and post-tests to assess their speaking skills. The experimental group, which engaged in video-recorded speaking tasks, showed a significantly higher improvement in their speaking skills compared to the control group. This finding shows the efficacy of video recording as a tool for improving students' speaking abilities.

In Vietnam, some studies have explored the effectiveness of video-recording techniques in improving EFL students' speaking skills. Pham and Le (2023) examined the perceptions of Vietnamese tertiary students regarding the benefits of video-recording in language learning. Using a mixed-method approach, data were collected from 195 undergraduates through questionnaires and semi-structured interviews. The findings revealed that video-recording tasks significantly enhance both linguistic and non-linguistic aspects of students' development. Non-linguistically, students reported improvements in learning autonomy, ICT literacy, and non-verbal communication skills. Linguistically, the technique promoted students' self-evaluation, activated their background knowledge, and improved their pronunciation. These results suggest that English language teachers should consider incorporating video-recording techniques into their speaking classes. Additionally, Tran and Nguyen (2021) investigated the impact of a mobile video recording task-based approach on the speaking skills of non-English majors. Forty students were divided into experimental and control groups, with the experimental group receiving mobile video recording tasks while the control group did not. The study assessed differences in fluency, grammar, vocabulary, and pronunciation, and gathered students' attitudes through questionnaires and semi-structured interviews. The results showed that students in the experimental group significantly outperformed those in the control group. Moreover, students had positive attitudes toward using mobile video recording for practicing English speaking.

The previous studies mentioned above have shed light on the positive impacts of using video-recording speaking practice on students' speaking proficiency development. However, there is limited research investigating the effects of this activity on students' affective aspects and autonomous abilities. Therefore, this study intends to fill the gap by examining EFL students' perceptions of how engaging in technology-assisted speaking tasks, using video-making and video-delivering tools, influences their affect and autonomy.

This study aims to answer the following research questions:

1. *How do technology-assisted tasks affect EFL students' affect in speaking practice?*
2. *How do technology-assisted tasks affect EFL students' autonomy in speaking practice?*

The study uses the following theoretical framework (Fig. 1) proposed based on the Affective Filter Hypothesis (Krashen, 1982) and the Learner Autonomy Theory (Holec, 1981) to guide the data collection and analysis.

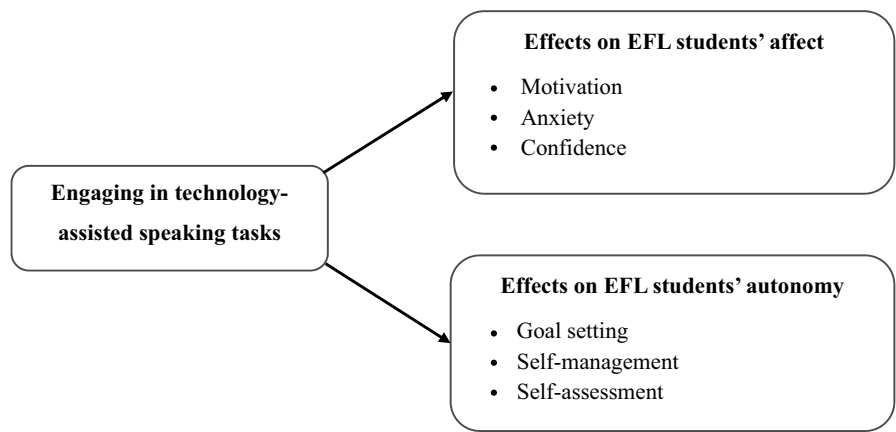


Fig. 1 The theoretical framework proposed for the study

Method

Research setting and task design

Research setting

This study was conducted at the faculty of English, at a public university in central Vietnam. At this institution, English language-related majors comprise an important part of its undergraduate full-time training programs. As part of the curriculum, English-majored students need to take part in five-level English language skills courses to develop their English proficiency before taking more specialized courses in teaching, translating, or interpreting.

The current study involved the *Speaking 2* course which is designed for first-year English majors in their second semester of the first academic year. This course lasts for 15 weeks and covers 8 speaking topics for students to learn and develop their speaking abilities at approximately the B1 level of English proficiency in the Common European Framework of Reference (CEFR). At this level, learners are considered ‘independent users’ who can understand the main ideas of everyday communication, participate in routine conversations, and express opinions on familiar matters with some fluency and accuracy (Council of Europe, 2020). The speaking course in the present study was carried out in a blended learning mode in which students attended a 100-min on-campus class every week and participated in online learning activities delivered on the university’s Moodle-based learning management system (i.e., <http://lms.huflis.edu.vn/>).

Technology-assisted speaking task design

As part of the formative assessment for the *Speaking 2* course, the course instructor, who is also the researcher, decided to assign speaking tasks with the assistance of technological tools that aimed at helping students practice their speaking skills after class. The process of designing and implementing technology-assisted speaking tasks was based on the procedure of technology-assisted task-based language assessment proposed by Cao et al. (2024). Specific details are described and exemplified with illustrations below:

Stage 1: Pre-task.

- **Task design and instruction:** The teacher assigned weekly speaking tasks for all the speaking topics that students learned in the on-site speaking class. There were a total of 10 speaking tasks for students to finish during the whole semester. The instructor instructs on how students should carry out their speaking tasks by explaining they should understand the task requirement, plan for their speaking performance, and record themselves performing the tasks using their mobile phones.
- **Digital platform selection:** The instructor explained that students can choose to upload their videos to different social platforms such as TikTok or YouTube or to their Google Drive. The instructor required students to submit their speaking video links to the Moodle LMS of the university (Fig. 2).

Stage 2: Task.

- **Task access and distribution:** Students accessed the speaking tasks on the LMS.
- **Task performance:** Depending on the task requirements, students prepared their speaking content individually and recorded their speaking performances.
- **Online submission:** Students uploaded their videos to the social sites of their choice, set their privacy access to their videos, and submitted the video links to the LMS (Fig. 3)

Stage 3: Post-task.

- **Evaluation:** The instructor regularly checked and marked students' submissions (one point for each video).
- **Feedback:** The instructor gave formative feedback to students' speaking videos to appreciate their hard work and encourage them to keep practicing. At this point, the instructor mainly focused on students' fluency and consistent speaking practice rather than emphasizing their mistakes in speaking performances (Fig. 4).

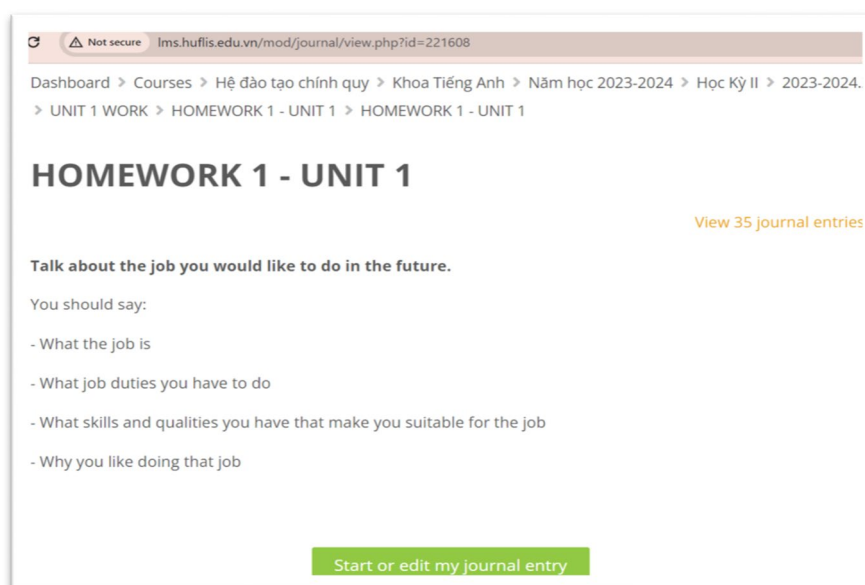


Fig. 2 An example of a speaking task created on the LMS

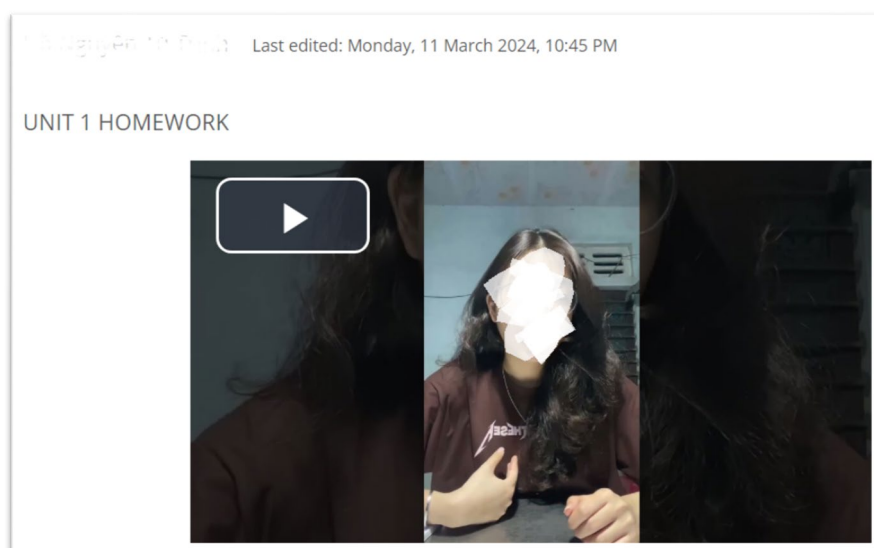


Fig. 3 An example of a student's speaking video submitted on the LMS

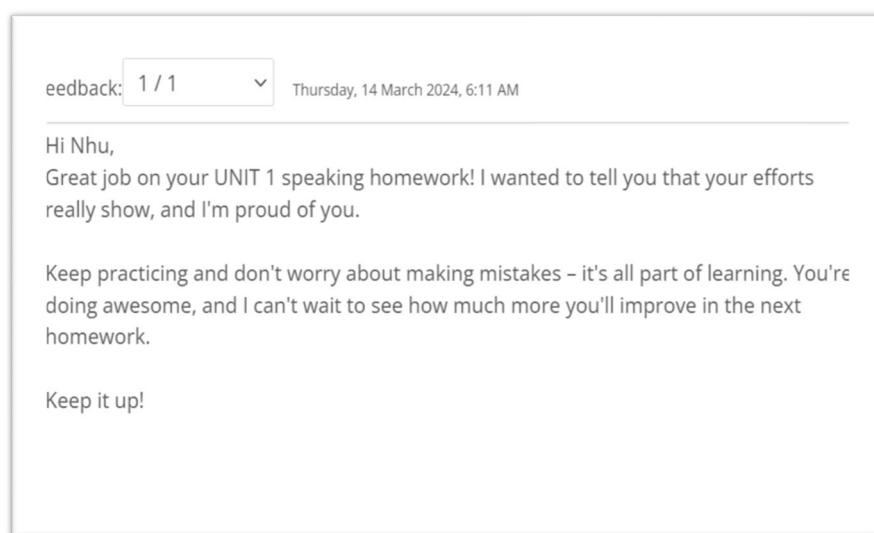


Fig. 4 An example of the instructor's mark and encouraging feedback on students' videos

Research approach

This study adopts mixed-methods research design, specifically an explanatory sequential design (Creswell & Plano Clark, 2018). In this design, the main data is collected through a questionnaire (quantitative phase), followed by brief follow-up interviews (qualitative phase) with selected students. Regarding timing, the quantitative data collection and analysis occur first, and the qualitative data collection follows to help explain and elaborate on the survey findings. In terms of weighting, priority is given to quantitative data, as it provides the primary evidence about students' perceptions, while qualitative data plays a supportive role by adding depth and context. The mixing of the two strands happens at the interpretation stage, where insights from the interviews are used to clarify,

Table 1 Description of survey items

Survey items	Constructs	Aspects
1, 2, 3, 4, 5	Motivation	RQ1: Effects on students' affect
6, 7, 8, 9, 10	Anxiety	
11, 12, 13, 14, 15	Confidence	
16, 17, 18, 19, 20	Goal setting	RQ2: Effects on students' autonomy
21, 22, 23, 24, 25	Self-management	
26, 27, 28, 29, 30	Self-assessment	

Table 2 Reliability statistics of survey items

Constructs	Cronbach's Alpha	N of Items
Motivation	.877	5
Anxiety	.883	5
Confidence	.903	5
Goal setting	.904	5
Self-management	.926	5
Self-assessment	.878	5

expand, and triangulate the survey results (Creswell & Creswell, 2018). This approach ensures a more nuanced and comprehensive understanding of the effects of video-recording tasks on students' affect and autonomy in the EFL speaking course.

Research instruments

Data was collected through two instruments: a web-based questionnaire and face-to-face semi-structured interviews. First, the web-based survey included two sections. Section 1 collects demographic information from students including gender, major, previous speaking course score (to understand their current speaking proficiency), and self-assessed technical skills. Section 2 consists of 30 Likert-scale items categorized into two research aspects: students' affect and autonomy. These five-point Likert-scale items were designed on the ground of the Affective Filter Hypothesis (Krashen, 1982), and the Autonomy Theory (Holec, 1981) discussed in the literature review. Each research aspect includes three different clusters described in the theoretical framework (Fig. 1), see Table 1 below for more details.

The reliability of the survey items across all constructs is indicated by Cronbach's Alpha values ranging from .877 to .926 (Table 2). It is commonly known that Cronbach's Alpha values above .70 are generally considered acceptable, with higher values indicating greater reliability. This means the survey items within each construct mentioned above are reliable enough to consistently measure the same underlying concept.

After the questionnaire, a small number of students were invited to participate in brief, semi-structured interviews. The purpose of these interviews was to further explore and clarify students' perceptions that emerged from the survey data. The interview protocol consisted of a short set of guiding questions focused on students' experiences with the video-recording tasks, their feelings of confidence and motivation, and their perceived autonomy in speaking activities. Each interview lasted approximately 05–10 min and

was audio-recorded with the participants’ consent. The interview questions were open-ended but flexible, allowing the researcher to probe for clarification when needed.

Research participants

Adopting a convenient sampling method, this study involved the participation of 80 first-year English-majored students who attended four Speaking 2 classes taught by the researcher in the second semester of the 2023–2024 academic year. The total number of enrolled students in these four classes was 175, of whom 80 voluntarily participated in the study, accounting for nearly 50% of the population who engaged in the video-recording tasks. Participation was entirely optional, and students were neither required nor pressured to take part. Among 80 participants in the survey, most were female (nearly 90%) and majored in English language and English language teaching. The result of these students’ most recent speaking course (i.e., Speaking 1) indicated that the majority of them performed quite well in speaking skills, with over 90% receiving A (8.5 – 10) and B (7.0 – 8.4) scores. In terms of their technology skills, most of the students self-assessed that their technical abilities ranged between basic and intermediate levels. More details about the demographics of the participants are presented in Table 3 below.

For the follow-up interviews, eleven students (one male and ten female) were purposively selected from the same group of questionnaire respondents. These participants, referred to by pseudonyms (i.e. Diana, Daisy, Mimi, Nancy, Kaity, Susan, Jack, Mary, Linda, Dania, and Lucy), were chosen because they had demonstrated the highest level of engagement in the course activities, completing all ten required speaking tasks across the semester. Their consistent participation could provide a valuable basis for exploring in greater depth the themes identified in the survey.

Data collection, analysis and integration

At the end of the speaking course in late May 2024, a web-based questionnaire was sent to a Facebook group that the researcher created to contact students in Speaking 2 classes. Students were encouraged to reflect on their experience of completing

Table 3 Demographic information of the participants

Question	Options	Number N = 80	Percentages 100%
Gender	Male	8	10%
	Female	71	88.80%
	Prefer not to say	1	1.20%
Major	English language	57	71.30%
	English language teaching	23	28.70%
Speaking 1 score	A	35	43.80%
	B	39	48.80%
	C	6	7.50%
	D	0	0%
Technology skills	Advanced	8	10%
	Intermediate	37	46.30%
	Basic	35	43.80%

video-recording speaking tasks and share their responses to the survey. After the online survey was conducted, in-person interviews were carried out in person with eleven students to collect more detailed sharing. The interviews were conducted in Vietnamese for convenience and were recorded for later data analysis.

Different methods were employed to analyze data collected from both questionnaire and follow-up interviews. Specifically, the quantitative data were analyzed using SPSS version 30. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated to summarize participants' responses. These analyses helped to identify general trends and provide a clear overview of students' perceptions and practices (Creswell & Creswell, 2018). In addition, comparisons of means were conducted between six clusters in the two constructs, namely affect and autonomy, to explore potential differences. A correlation matrix was also created to examine the relationships between these clusters across the two constructs. Meanwhile, the qualitative data were subjected to six-step thematic analysis (Braun & Clarke, 2006). Students' responses were transcribed, verbatim translated from Vietnamese to English, coded, and categorized into themes and subthemes (as shown in Table 4) that reflected recurring patterns and insights. Besides, relevant excerpts were extracted to illustrate key points and used to complement and deepen the understanding of the survey findings.

Quantitative and qualitative data were then integrated to provide both breadth and depth in understanding the effects of technology-assisted speaking tasks. The questionnaire generated quantitative data that reflected general trends in students' perceptions, while the interviews yielded qualitative insights that offered detailed explanations and personal experiences behind those trends. The integration was carried out at the stage of analysis and reporting: survey results were first presented to identify overall patterns, which were then complemented by interview excerpts illustrating or elaborating on the numerical findings. In this way, the questionnaire data established the scope of students' affect and autonomy, whereas the interview data added nuance by highlighting individual voices and contextual factors, enabling a more comprehensive interpretation of the findings.

Table 4 Interview data coding schemes

Main themes	Subthemes	Example Extracts (Translated Verbatim)
Affect	Enjoyment and positive feelings	"Recording videos for homework is livelier and more exciting... it affects my interest and learning spirit, so I find it very effective."
	Confidence and reduced anxiety	"I feel more comfortable and confident when practicing speaking alone."
	Negative emotions and mixed feelings	"At first I felt nervous and afraid that I could not speak."/ "I still prefer speaking activities in class."
	Motivation and accountability	"Having assignments and deadlines gives me more motivation to study."
Autonomy	Self-monitoring and reflection	"When I watch my videos again, I discover my mistakes."
	Independent preparation and planning	"When making video tasks, I had to prepare and write scripts, which also improved my writing skills."
	Strategic learning and resource use	"When I couldn't answer some questions, I asked friends to give me ideas."

Ethical considerations

Ethical considerations were strictly observed during data collection, analysis, and reporting of findings. For the questionnaire, students were informed of the study's purpose, assured that participation was voluntary, and guaranteed anonymity of their responses. For the follow-up interviews, participants provided with informed consent, were reminded of their right to withdraw at any time, and were assured of confidentiality through the use of pseudonyms in the findings report. All data were securely stored and used solely for research purposes.

Research findings

RQ1: Effects of technology-assisted speaking tasks on students' affect

The research results, summarized in this section, indicate students' perceptions of the effects of engaging in technology-assisted speaking practice on different affective aspects including motivation, anxiety reduction, and confidence.

Effects on students' motivation for practicing speaking skills

It is revealed from Table 5 that students expressed high levels of enjoyment and motivation towards creating and engaging with technology-assisted speaking tasks, as indicated by consistently high mean scores across multiple survey items. Specifically, students reported finding the process of engaging in technology-assisted speaking tasks enjoyable ($M=4.07$) and expressed strong motivation to practice speaking independently outside of class ($M=4.09$). Moreover, the prospect of receiving grades and recognition from teachers further motivated students to participate in these tasks ($M=4.09$). Students also indicated that technology-assisted speaking tasks made them feel more motivated to improve their speaking skills ($M=4.09$), demonstrating the positive impact of these activities on their language learning development. However, students showed slightly less enthusiasm towards the actual recording process itself ($M=3.90$), with a higher degree of variability in their responses ($SD=0.789$).

This survey result is consistent with the sharing of some students in the follow-up interviews when they admitted that they had more learning motivation to practice their speaking skills through weekly video-recording tasks. For example, a student shared that:

Thanks to the video-recording speaking homework in the Speaking 2 course, I found

Table 5 Effects of technology-assisted speaking tasks on students' speaking motivation

Survey items	Mean	SD
1. I found technology-assisted speaking tasks to be enjoyable	4.07	.612
2. Technology-assisted speaking tasks motivated me to practice speaking independently outside the classroom	4.09	.620
3. I am motivated to do technology-assisted speaking tasks to receive grades and recognition from my teacher	4.09	.715
4. I enjoyed the process of recording myself speaking English	3.90	.789
5. I felt more motivated to improve my speaking skills because of technology-assisted speaking tasks	4.09	.660
	4.05	0.679

myself more hardworking than in the previous semester because I had more chances to practice speaking.

(Dania, Interview 8)

Another student also said that:

Without speaking homework, I often don't know what to learn, but when I had to do speaking tasks through video recording, I felt more motivated to practice my speaking skills.

(Daisy, Interview 2)

In addition, one male student named Jack mentioned that he felt “excited” when filming himself speaking because making videos is also his hobby; as a result, he really enjoyed this activity. Especially, a girl called Mimi shared that “gaining marks for speaking videos is also my learning motivation”. These perspectives reflect that the use of video-recording speaking tasks brings students not only intrinsic motivation but also extrinsic encouragement to develop their speaking skills.

Effects on students' speaking anxiety reduction

Data from Table 6 indicates that technology-assisted speaking tasks significantly alleviate EFL students' speaking anxiety. Across various survey items, students consistently reported reduced levels of anxiety and increased comfort with speaking English through video-recording tasks. Specifically, students indicated that these tasks helped decrease their anxiety about speaking English ($M = 3.94$), provided a less stressful alternative to classroom speaking ($M = 4.06$), and aided in overcoming their fear of speaking ($M = 4.00$). Furthermore, students felt less nervous about making mistakes ($M = 4.06$) and experienced reduced stress overall when engaging in these tasks ($M = 4.04$). The consistently high mean scores across these items, coupled with relatively low standard deviations, suggest a widespread positive impact of technology-assisted speaking tasks on students' comfort levels in practicing speaking skills. These findings indicate the potential of technology-assisted speaking tasks not only to enhance speaking proficiency but also to create a supportive learning environment that can reduce speaking anxiety among EFL learners. Regarding speaking anxiety reduction, two students in the interviews shared their opinions on how engagement in this activity helped them feel less anxious about speaking.

At first, I felt worried about making speaking videos because I thought I couldn't

Table 6 Effects of technology-assisted speaking tasks on students' speaking anxiety reduction

Survey items	Mean	SD
6. Doing technology-assisted speaking tasks reduced my anxiety about speaking English	3.94	.735
7. I felt less anxious when doing technology-assisted speaking tasks compared to classroom speaking	4.06	.735
8. The process of doing technology-assisted speaking tasks helped me overcome my fear of speaking English	4.00	.779
9. Technology-assisted speaking tasks made me less nervous about making mistakes in English	4.06	.718
10. I felt less stressed about speaking English after completing technology-assisted speaking tasks	4.04	.754
	4.02	0.744

speak. However, after several times of recording videos, I could improve my speaking skills.

(Diana, Interview 5)

I found it more comfortable to practice speaking on my own.

(Mimi, Interview 9).

It can be implied that practicing speaking in a less pressured and more private environment can help students feel less anxious about speaking English; therefore, they can be more encouraged to develop their speaking abilities.

Effects on students' self-confidence enhancement for speaking skills

The survey data in Table 7 reveal that technology-assisted speaking tasks have a profound and consistent positive impact on EFL students' self-confidence in speaking skills. Across various survey items, students consistently reported heightened levels of confidence after engaging in video-recording tasks. To specify, students indicated feeling more confident in their speaking abilities (Mean=4.05), experiencing improved self-confidence overall (Mean=4.05), and feeling comfortable expressing themselves in English through these tasks (Mean=4.04). Moreover, students reported that technology-assisted speaking tasks significantly contributed to building their confidence in speaking skills (Mean=4.10) and feeling proud of their progress when reviewing their recordings (Mean=4.13).

Similarly, most of the interviewed students also admitted to becoming more confident in their speaking skills thanks to regular practice through technology-assisted speaking tasks. Below are some extracts from students' responses:

Compared with semester 1, this semester, when I did my speaking homework by recording videos, I felt much more confident to talk with other people [in English]....

I can even confidently talk to foreigners at my part-time work.

(Nancy, Interview 10)

I used to feel unconfident about talking to my teacher [in English], but thanks to practicing speaking by making videos, now I can talk to you [the speaking teacher] without fear.

(Kaity, Interview 11)

Table 7 Effects of technology-assisted speaking tasks on students' speaking confidence

Survey items	Mean	SD
11. I felt more confident in my speaking abilities after doing technology-assisted speaking tasks	4.05	.745
12. Technology-assisted speaking tasks improved my self-confidence in speaking English	4.05	.778
13. I felt comfortable expressing myself in English through technology-assisted speaking tasks	4.04	.702
14. Technology-assisted speaking tasks helped me build confidence in my speaking skills	4.10	.686
15. I felt proud of my progress after reviewing my video recordings	4.13	.718
	4.07	0.726

However, some students also showed a mixture of feelings in terms of speaking confidence when doing video-recording speaking tasks and in other speaking contexts.

Of course, I felt confident when I talked to myself in front of the camera; however, I am not sure I am still confident when interacting with other students... I am worried that I have to speak in pairs in the speaking tests, so it would be better to practice speaking with a partner.

(Mimi, Interview 9)

I am not sure about my confidence. When I record speaking videos, I am confident, but it is different to talk to you [the teacher] and other classmates [in English].

(Susan, Interview 4)

This finding is important because it is necessary for speaking teachers to consider the types of interaction that students need to be involved in when making speaking homework videos. Besides monologues, conversational tasks in which students interact with each other to complete the speaking assignments can be a viable idea to help students increase their confidence in using English for communicative purposes. As one student shared:

I want to have more group work as making videos to practice speaking alone is not really exciting. I think working in groups can encourage students to collaborate more effectively.

(Jack, Interview 1)

To further examine the relationships among the three affective factors, paired-samples t-tests were conducted to compare students' motivation, anxiety reduction, and confidence levels when participating in technology-assisted speaking tasks (more detailed results can be found in Appendix A). As shown in Table 8, no statistically significant differences were found between the pairs: motivation and anxiety ($t(79)=0.62$, $p=.54$, $d=0.07$), motivation and confidence ($t(79)=-0.53$, $p=.60$, $d=-0.06$), and anxiety and confidence ($t(79)=-0.97$, $p=.34$, $d=-0.11$). The very small effect sizes (all $|d|<0.20$) indicate that the mean differences were negligible in practical terms, suggesting that students perceived motivation, anxiety reduction, and confidence at comparable levels.

For research question 1, these above results show that technology-assisted speaking tasks provide an affectively supportive environment that fosters motivation, reduces speaking anxiety, and builds confidence, all of which are essential for sustained speaking practice and language development.

Table 8 Paired-samples t-tests and effect sizes comparing motivation, anxiety, and confidence

Pairs	Mean Difference	t(79)	p	Cohen's d
Motivation – Anxiety	0.03	0.62	.54	0.07
Motivation – Confidence	-0.03	-0.53	.60	-0.06
Anxiety – Confidence	-0.05	-0.97	.34	-0.11

RQ2: Effects of technology-assisted speaking tasks on students' autonomy

The findings presented below will reveal how students perceive the effects of engaging in technology-assisted speaking tasks on their autonomous abilities in terms of goal-setting, self-management, and self-assessment.

Effects on students' ability to set goals for speaking practice

The result in Table 9 indicates that technology-assisted speaking tasks had a strong positive impact on students' self-regulation and goal-setting behaviors. Specifically, students reported that technology-assisted speaking tasks helped them set specific speaking goals (Mean=4.10) and regularly set personal goals for improvement (M=3.95). The tasks were effective in teaching students how to plan and prepare before speaking (M=4.19), and encouraged them to set higher standards for their speaking performance (M=4.11). Students also found it useful to set goals for their video recordings (M=4.10). These findings underscore the role of technology-assisted speaking tasks in fostering a more self-directed and goal-oriented approach to language learning.

The interview data also reflects that students acknowledged they could learn to make plans for their speaking tasks, which can encourage vocabulary retention, logical thinking, and expression skills.

Before I speak, I list out the vocabulary I will use.

(Nancy, Interview 10)

When I have a [speaking] assignment, I often write down my ideas, then try speaking and filming. This helps me think and speak more fluently.

(Mimi, Interview 9)

When making a speaking homework video, I have to prepare and write a script for what I say, so it helps me to improve both my speaking and writing skills. In the process of preparing content, I can use the vocabulary related to the topics that I have learned.

(Susan, Interview 4)

Effects on students' self-management of their speaking practice

The findings in Table 10 unveil that technology-assisted speaking tasks positively influence students' self-management of their speaking practice. Students consistently made efforts to complete video-recording tasks weekly (M=3.95) and found that creating

Table 9 Effects of video-recording speaking tasks on students' goal-setting for speaking practice

Survey items	Mean	SD
16. Doing technology-assisted speaking tasks helped me set specific speaking goals	4.10	.686
17. I regularly set personal goals for my speaking improvement when doing technology-assisted speaking tasks	3.95	.710
18. Doing technology-assisted speaking tasks taught me how to plan and prepare before speaking	4.19	.618
19. Recording myself speaking encouraged me to set higher standards for my speaking	4.11	.616
20. I find it useful to set goals for my technology-assisted speaking tasks	4.10	.686
	4.09	0.663

Table 10 Effects of technology-assisted speaking tasks on students' self-management of speaking practice

Survey items	Mean	SD
21. I made a consistent effort to do technology-assisted speaking tasks every week	3.95	.794
22. Creating video portfolios encouraged me to explore additional learning resources for improving my speaking skills	4.09	.697
23. I was more disciplined in sticking to my speaking practice schedule when doing technology-assisted speaking tasks	3.86	.791
24. Doing technology-assisted speaking tasks helped me better manage my learning time	4.06	.681
25. Video portfolios made me more responsible for developing my speaking skills	4.07	.632
	4.01	0.719

video portfolios encouraged them to explore additional learning resources ($M=4.09$). The tasks also promoted greater discipline in adhering to a speaking practice schedule ($M=3.86$) and helped students better manage their learning time ($M=4.06$). Additionally, students felt more responsible for developing their speaking skills through video portfolios ($M=4.07$).

Two students in the follow-up interviews mentioned that the use of technology-assisted speaking tasks helped them manage their learning time to prepare for the speaking test at the end of the semester.

Recording videos to practice speaking helps me to be well-prepared in advance, so when I sit the speaking exam and encounter those [speaking] questions, I won't be surprised. I think that's a great advantage of doing the speaking exercises.

(Mary, Interview 3)

Each time I record a speaking task, I have a chance to practice my speaking skills to prepare for the speaking test.

(Diana, Interview 5)

Another student shared that through the process of preparing for speaking videos, students can also explore different resources to help them develop speaking skills.

When I do the speaking tasks, if there are any questions I cannot answer, I will ask my friends for suggestions so that I can have ideas for the speaking part.

(Linda, Interview 7)

The researcher also asked two students who submitted their speaking videos on the LMS very punctually at the beginning of the semester but were late for some of their submissions in the later part to understand why there was a change in their discipline. These two students admitted that "it was because I am lazy" (Lucy, Interview 6) and "because I think the deadlines are not really strict, I tend to delay making and submitting my videos" (Diana, Interview 5). Therefore, it can be said that besides students who were highly disciplined for their self-regulated practice, some struggled to maintain their hard work and consistent effort for this activity over the whole semester. This implies that the teacher should have set stricter deadlines for students to submit their speaking videos to encourage students to manage their speaking practice more effectively.

Effects on students' self-assessment of speaking skills

The findings in Table 11 demonstrate that technology-assisted speaking tasks significantly enhance students' self-assessment abilities regarding their speaking skills. Reviewing video recordings helped students identify areas for improvement ($M=4.12$) and learn how to reflect on their speaking progress ($M=4.15$). Watching their recordings made students more aware of their strengths and weaknesses in speaking English ($M=4.17$), and the process of creating and reviewing videos helped develop their self-assessment skills ($M=4.15$). Moreover, students could learn from their own mistakes and better prepare for future speaking tasks by watching their recordings ($M=4.11$).

Similarly, students' responses in the interviews also reveal the value of self-assessment for improvement by rewatching their speaking videos. Listed below are some ideas that students expressed:

This is an effective way to learn speaking skills because when I record a video, I can also hear my intonation or mispronunciation to correct it.

(Mary, Interview 3)

When I record a video and watch it again, I can know the strengths and weaknesses of my pronunciation, and whether my accent is good.

(Susan, Interview 4)

I like to rewatch [my videos] a lot to see if I made any mistakes.

(Mimi, Interview 9)

When I watch my videos again, I can discover my mistakes because when I speak, I often pay more attention to fluency [rather than accuracy].

(Linda, Interview 7)

For the first speaking video, I had to record it 3 times because I felt like I didn't do it well, so I had to do it over and over again until I felt it was okay to upload and submit.

(Kaity, Interview 11)

Most of the students' sharing shows that they could have a chance to evaluate their speaking performances by watching the recorded videos. Thanks to that, they could recognize what they had done well and what they needed to improve, especially aspects like pronunciation, intonation, or grammar.

The relationships among goalsetting, self-management, and self-assessment were also examined through paired-samples t-tests. As shown in Table 12, a statistically significant

Table 11 Effects of technology-assisted speaking tasks on students' self-reflection of speaking skills

Survey items	Mean	SD
26. Reviewing my video recordings helped me identify areas for improvement	4.12	.700
27. I learned how to reflect on my speaking progress while reviewing my video-recording tasks	4.15	.618
28. By watching my own video recordings, I am more aware of my strengths and weaknesses in speaking English	4.17	.708
29. The process of creating and reviewing speaking videos helped me develop self-assessment skills	4.15	.576
30. By watching my video recordings, I can better prepare for my next speaking tasks	4.11	.656
	4.14	0.652

Table 12 Paired samples t-test and effect sizes for goalsetting, self-management, and self-assessment

Pairs	Mean difference	<i>t</i> (79)	<i>p</i>	Cohen's <i>d</i>
Goalsetting – Self-management	0.083	2.20	.030	0.25
Goalsetting – Self-assessment	−0.053	−1.60	.113	−0.18
Self-management – Self-assessment	−0.135	−3.17	.002	−0.35

difference was found between goalsetting and self-management ($t(79)=2.20$, $p=.030$, $d=0.25$), with students rating goalsetting slightly higher. No significant difference was observed between goalsetting and self-assessment ($t(79)=-1.60$, $p=.113$, $d=-0.18$). However, a significant difference was found between self-management and self-assessment ($t(79)=-3.17$, $p=.002$, $d=-0.35$), indicating that students rated self-assessment more positively than self-management. The small effect sizes ($|d|=0.18-0.35$) suggest that while the differences were statistically significant in some cases, they were modest in practical terms. These results suggest that while technology-assisted speaking tasks effectively promote all three dimensions of autonomy, they appear to particularly strengthen learners' capacity for reflective self-assessment and systematic goal-setting, whereas sustained self-management may still require teacher support and structured accountability.

To understand the interrelationships among the six constructs, a Pearson correlation analysis was conducted. As shown in Appendix B, all six variables were positively and significantly correlated at the 0.01 level. The strongest associations were found between goal-setting and self-assessment ($r=.860$) and between goal-setting and self-management ($r=.850$), which highlights the close connection among autonomy-related dimensions. Self-management also demonstrated a strong correlation with self-assessment ($r=.800$). In terms of affective factors, motivation was strongly correlated with both self-assessment ($r=.783$) and goal-setting ($r=.768$). This can suggest that motivated learners tend to adopt more self-regulatory strategies. Interestingly, anxiety was also positively correlated with other constructs, such as motivation ($r=.776$) and goal-setting ($r=.717$), which means students who reported higher anxiety still engaged in self-regulated learning behaviors.

Discussions

Effects of technology-assisted tasks on EFL students' affect in speaking practice

The findings for the first research question demonstrate the positive impact of technology-assisted speaking tasks on reducing students' affective barriers, which are widely recognized as crucial in facilitating second language acquisition (Dörnyei, 2005; Krashen, 1982). The integration of technology into speaking practice appears to provide both intrinsic and extrinsic motivational benefits. On the one hand, it enhances intrinsic motivation by making speaking practice more enjoyable, interactive, and engaging, which encourages students to invest more effort in improving their oral proficiency (Meggo et al., 2022; Mulyadi et al., 2021). On the other hand, it contributes to extrinsic motivation by allowing students to achieve tangible rewards such as improved grades, positive teacher feedback, and peer recognition (Dörnyei & Hadfield, 2014; Tukan,

2024). This dual motivational effect is particularly valuable in sustaining long-term learning commitment.

Another important finding is that technology-assisted speaking tasks significantly reduce students' levels of anxiety and stress. By practicing through recorded video submissions or digital platforms, students can rehearse, edit, and present their ideas in less intimidating contexts compared to speaking spontaneously in front of peers. This process creates a low-pressure environment where learners feel safer to take risks and make mistakes, which is especially beneficial for those who struggle with speaking anxiety (Arifin, 2017; Suparlan, 2021; Tran & Dang, 2019). Lowering affective barriers in this way can help learners gradually transfer their comfort with technology-mediated speaking to more authentic communicative situations.

Moreover, the study reveals a notable increase in students' self-confidence in their speaking abilities as a result of technology-supported tasks (Amoah & Yeboah, 2021; Tran & Dang, 2019). Confidence is a key affective factor influencing willingness to communicate, and when students believe in their ability to express themselves effectively, they are more likely to participate actively in classroom speaking activities. This improved self-belief may also lead to greater risk-taking in language use, a factor strongly associated with progress in communicative competence. Taken together, these findings suggest that integrating technology into speaking practice does not merely supplement traditional methods but can serve as an affective scaffold that supports motivation, reduces anxiety, and builds confidence, thereby fostering a more positive learning environment and encouraging students' active engagement in oral communication (Sakina et al., 2024; Yahya et al., 2019).

Effects of technology-assisted tasks on EFL students' autonomy in speaking practice

Technology-assisted speaking tasks offer students a meaningful degree of autonomy over their learning, which is an essential component of effective language acquisition. As Dincer (2020) argues, autonomous learning practices outside of class play a significant role in shaping students' language proficiency, with more autonomously engaged learners generally outperforming their less autonomous peers. In this sense, promoting autonomy in speaking practice does not only complement teacher-led instruction but also empowers students to take responsibility for their own development (Pham & Le, 2023).

In particular, the process of creating speaking videos allows students to engage in self-directed goal-setting and task preparation. Before recording, students must reflect on the topic, plan the content, and select appropriate language to express their ideas, which encourages deeper processing of input and greater linguistic awareness (Benson, 2016; Little, 2020). Holec (1981) emphasized that such self-regulated behaviors provide learners with opportunities to practice diverse strategies that can maximize their learning outcomes. For instance, through sustained engagement in video-recording tasks across a semester, students learn to manage their time, maintain self-discipline, and leverage digital tools to meet task requirements effectively. These practices align closely with the principles of learner autonomy, where students gradually build the ability to plan, monitor, and evaluate their own learning (Nguyen et al., 2022).

Another notable advantage of technology-assisted speaking tasks is the ease of reviewing recorded performances. The ability to replay and evaluate their own speech enables students to identify strengths and weaknesses, thereby enhancing their self-assessment and self-reflection skills, abilities that are increasingly recognized as crucial for continuous progress in language learning (Nguyen et al., 2022; Pham & Nguyen, 2021). This sense of control over the learning process not only improves immediate task performance but also contributes to developing lifelong learning competencies. Ultimately, by integrating technology into speaking practice, teachers can provide students with structured opportunities to exercise autonomy, thereby fostering greater engagement, responsibility, and sustainable growth in their communicative competence (Perveen, 2016; Yahya et al., 2019).

Pedagogical recommendations

This study reinforces the notion that frequent practice is crucial for improvement in speaking skills (Swain, 1985). With the problem of limited class time in speaking courses, using technology-assisted speaking tasks is proven to be a viable solution to provide students with more opportunities to practice speaking outside of class. Currently, with the increasing popularity and accessibility of video-maker tools and social media platforms, EFL teachers can have more choices in supporting students with technology-enhanced speaking practice (Chau, 2021; Parveen, 2016). In this study, students were required to record themselves speaking and submit their videos on the university's Moodle LMS. However, EFL teachers in other contexts can adjust the procedure and choose other tools and platforms for students to share their products. In addition, the use of technology-assisted speaking tasks as part of the speaking syllabus in EFL classrooms can be beneficial as it helps personalize students' speaking practice and promotes self-paced learning (Yahya et al., 2019). This can solve such speaking-hindering issues as large class sizes and mixed-level classes which are often common in the EFL context (Amoah & Yeboah, 2021; Bhutto et al., 2023).

The findings of this study imply several considerations to enhance the effectiveness of using technology-assisted speaking tasks to promote students' out-of-class speaking practice. Firstly, EFL speaking teachers should incorporate video-recorded speaking tasks into the curriculum, not as a one-off activity but as a regular component of formative assessment. This consistent use can help lower students' speaking anxiety, boost confidence, and make practice more engaging. While technology-assisted tasks naturally encourage students to set goals and evaluate their progress, teachers may need to deliberately scaffold activities that promote self-management. For instance, integrating features such as structured practice schedules, reminders, or task checklists within speaking activities could help students sustain practice beyond the immediate task. Effective deadline management, including clear bonuses for early and regular submissions as well as punishing policies for late submissions, can encourage students to stay disciplined. In terms of task design, while monologue speaking tasks can build students' confidence, combining these with collaborative speaking tasks where students interact with peers in pairs or groups can better bridge the gap to real-world speaking situations and promote conversational skills. Moreover, providing clear technical instructions and timely technical support when students use video-making tools or submitting videos to

selected platforms is crucial to minimizing frustration and ensure smooth participation. It is also observed that, due to technical challenges such as lack of devices or limited technical skills, many students failed to engage in technology-assisted speaking tasks as effectively and frequently as they could. Therefore, teachers who would like to apply this activity to their teaching context should take students' technological accessibility and ability into careful account to maximize the successful implementation. Furthermore, instead of requiring weekly speaking videos, teachers might ask students to produce a video for every two units, which can help to reduce students' workload and increase their engagement. Finally, offering intermediate and corrective feedback to students' videos can help students improve their weaknesses. As mentioned before, in this study, because of her heavy workload, the instructor could only provide encouraging feedback to students' submitted videos to appreciate their effort and consistent practice rather than focusing on language accuracy such as pronunciation or grammar. Teachers might consider integrating AI technologies for feedback delivery on students' speaking videos to save teachers time and reduce their workload, making the feedback process more efficient and effective.

Conclusion and limitations

This study explores the impacts of using technology-assisted speaking tasks on students' affect and autonomy in the EFL higher education context in Vietnam. The findings show that the effects of technology-assisted speaking tasks on EFL students' affective and autonomous factors are overwhelmingly positive. Firstly, students consistently reported feeling more confident in their speaking abilities, experiencing reduced anxiety about speaking English, and feeling comfortable expressing themselves through technology-assisted speaking tasks. Practicing speaking skills through video recording not only helped students overcome their fear of making mistakes but also provided a supportive environment for practicing speaking skills independently. Secondly, technology-assisted speaking tasks significantly enhance students' autonomy. Engaging in video-recording speaking activities helped students set specific speaking goals and maintain a consistent effort toward their regular speaking practice. Creating speaking videos as homework also encouraged students to explore additional learning resources such as online learning materials or peer support, and fostered students' greater discipline and responsibility in managing their learning time and adhering to practice schedules. Furthermore, the process of reviewing video recordings heightened students' awareness of their strengths and weaknesses, facilitated self-reflection, and developed their self-assessment skills, ultimately preparing them better for future speaking tasks. For these reasons, it is recommended that EFL teachers in similar teaching contexts consider integrating technology-assisted speaking tasks as part of their speaking courses. For these aforementioned positive impacts on students' learning affect and autonomy, this study recommends the use of technology-assisted speaking tasks as a viable measure to encourage students to practice speaking skills more regularly and effectively outside class time.

This study has several limitations that should be acknowledged. Conducted in a single public university, it might lack cross-institutional perspectives. Future research should involve participants from multiple institutions to enhance generalizability. In addition, the relatively small sample size (80 survey participants and 11 interviewees) can limit the

breadth of insights, so larger cohorts would be valuable in subsequent studies. Moreover, the sample was largely homogeneous, with most female participants and nearly half of them identified as high-achieving students, which may restrict the applicability of the findings to more diverse learner populations. Future research could address this by employing stratified sampling to compare across gender and proficiency levels. Finally, the reliance on self-reported data through questionnaires and interviews may introduce bias; thus, future research can adopt methodological triangulation through video observations, focus group discussions, or LMS learning analytics to provide richer and more reliable evidence of students' affect and autonomy in speaking practice.

Appendix A

Paired Samples Test										
		Paired Differences							Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Motivation - Anxiety	.02750	.39586	.04426	-.06059	.11559	.621	79	.268	.536
Pair 2	Motivation - Confidence	-.02500	.42262	.04725	-.11905	.06905	-.529	79	.299	.598
Pair 3	Anxiety - Confidence	-.05250	.48652	.05439	-.16077	.05577	-.965	79	.169	.337

Paired Samples Effect Sizes						
			Standardizer ^a	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	Motivation - Anxiety	Cohen's d	.39586	.069	-.150	.289
		Hedges' correction	.39967	.069	-.149	.286
Pair 2	Motivation - Confidence	Cohen's d	.42262	-.059	-.278	.160
		Hedges' correction	.42669	-.059	-.276	.159
Pair 3	Anxiety - Confidence	Cohen's d	.48652	-.108	-.327	.112
		Hedges' correction	.49120	-.107	-.324	.111

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

Paired Samples Test										
		Paired Differences							Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper	t	df		
Pair 1	Goalsetting - Selfmanagement	.08250	.33481	.03743	.00799	.15701	2.204	79	.015	.030
Pair 2	Goalsetting - Selfassessment	-.05250	.29294	.03275	-.11769	.01269	-1.603	79	.056	.113
Pair 3	Selfmanagement - Selfassessment	-.13500	.38157	.04266	-.21991	-.05009	-3.165	79	.001	.002

Paired Samples Effect Sizes

			Standardizer ^a	Point Estimate	95% Confidence Interval	
Pair 1	Goalsetting - Selfmanagement	Cohen's d	.33481	.246	.023	.468
		Hedges' correction	.33803	.244	.023	.464
Pair 2	Goalsetting - Selfassessment	Cohen's d	.29294	-.179	-.400	.042
		Hedges' correction	.29576	-.178	-.396	.042
Pair 3	Selfmanagement - Selfassessment	Cohen's d	.38157	-.354	-.579	-.127
		Hedges' correction	.38524	-.350	-.573	-.126

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

Appendix B

Correlations

		Motivation	Anxiety	Confidence	Goalsetting	Selfmanagement	Selfassessment
Motivation	Pearson Correlation	1	.776**	.746**	.768**	.736**	.783**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001
	N	80	80	80	80	80	80
Anxiety	Pearson Correlation	.776**	1	.687**	.717**	.612**	.690**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	80	80	80	80	80	80
Confidence	Pearson Correlation	.746**	.687**	1	.711**	.702**	.729**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	80	80	80	80	80	80
Goalsetting	Pearson Correlation	.768**	.717**	.711**	1	.850**	.860**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	80	80	80	80	80	80
Selfmanagement	Pearson Correlation	.736**	.612**	.702**	.850**	1	.800**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	80	80	80	80	80	80
Selfassessment	Pearson Correlation	.783**	.690**	.729**	.860**	.800**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	80	80	80	80	80	80

** . Correlation is significant at the 0.01 level (2-tailed).

Author contribution

I am the only author of this manuscript.

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Availability of data and materials

The datasets used and analyzed during the current study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to Participate

All participants provided informed consent before taking part in the study. They were informed about the purpose of the research, their right to withdraw at any time, and the confidentiality of their responses. By completing the survey, they consented to participate voluntarily.

Competing interest

This study was conducted in accordance with the ethical research guidelines of Hue University and adhered to general ethical principles for educational research. Formal ethical approval was not sought as the study did not involve sensitive data or interventions with human participants.

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