

RESEARCH ARTICLE

The Effects of ChatGPT-Supported Storytelling on English Speaking Performance among Vietnamese Secondary School Students: A Quasi-Experimental Study**Nguyen Kieu Loan¹, Nguyen Thanh Tu^{2*1}**¹ Dao Vien Secondary School, Bac Ninh Province, Vietnam² University of Transport Technology, Hanoi, Vietnam Country

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ABSTRACT

The growing use of generative artificial intelligence in English language teaching has created new opportunities for developing learners' oral communication through interactive and learner-centred activities. However, empirical evidence concerning ChatGPT-supported speaking instruction among lower-secondary students remains limited, particularly in the Vietnamese EFL context. This study examined the effects of ChatGPT-supported storytelling on seventh-grade students' English speaking performance and their acceptance of the technology. A quasi-experimental pre-test–post-test control-group design was employed with 80 students from Dao Vien Secondary School, Bac Ninh Province, Vietnam. Two intact classes were assigned as an experimental group ($n = 40$), which received ChatGPT-supported storytelling instruction, and a control group ($n = 40$), which received conventional presentation-based instruction. The intervention lasted 10 weeks and used speaking activities based on three units from the Grade 7 Global Success English textbook. Speaking performance was assessed across five dimensions: fluency and interaction, vocabulary, grammar, content and relevance, and pronunciation, intonation, and stress. Students in the experimental group also completed an 11-item Technology Acceptance Model questionnaire.

The experimental group's overall speaking score increased from 10.83 to 12.40, a gain of 1.57 points, whereas the control group's mean decreased from 10.90 to 9.88. Significant pre-test–post-test improvements were reported in all five speaking dimensions in the experimental group, with the largest gain occurring in vocabulary. Questionnaire results indicated positive perceptions of perceived usefulness ($M = 4.03$), perceived ease of use ($M = 3.87$), and intention to continue using the tool ($M = 3.90$). The findings suggest that ChatGPT-supported storytelling may be a promising supplementary approach to lower-secondary speaking instruction when implemented through structured communicative activities and active teacher mediation.

Keywords: ChatGPT; AI-supported storytelling; English speaking performance; secondary school students; Technology Acceptance Model; English language teaching.

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1. Introduction

The rapid development of generative artificial intelligence (GenAI) has created new opportunities for language teaching and learning. Among emerging applications, ChatGPT has attracted considerable attention because it can generate context-sensitive texts, respond interactively to prompts, suggest ideas, reformulate language, and provide immediate linguistic support. In English language teaching, ChatGPT has been examined as a teaching assistant, conversational partner, feedback provider, and resource-development tool (Ahn et al., 2024; Kohnke et al., 2023; Law, 2024; Moorhouse, 2024). Recent reviews further suggest that it may support personalized learning, learner autonomy, rapid access to language resources, and practice beyond the physical classroom (Lo et al., 2024; Zou et al., 2024). Nevertheless, its educational value depends on how it is integrated into pedagogically meaningful tasks rather than on the technology itself.

Speaking remains one of the most demanding skills for learners of English as a foreign language because effective oral communication requires the simultaneous coordination of vocabulary, grammar, pronunciation, fluency, interaction, content organization, intonation, and stress (Brown & Abeywickrama, 2019; Bygate, 1987; Luoma, 2004). From a communicative perspective, speaking also involves conveying meaning appropriately, responding to interlocutors, and adapting language to particular contexts (Canale & Swain, 1980; Littlewood, 1981; Richards, 2006). These demands can be especially challenging for lower-secondary learners, who may have limited linguistic resources and relatively few opportunities to use English outside the classroom.

Preliminary classroom observations at the research site indicated that many seventh-grade students were reluctant to participate in speaking activities because of limited vocabulary, insufficient grammatical knowledge, low confidence, and difficulty organizing ideas coherently. These constraints often interrupted oral production and reduced students' willingness to communicate. The study therefore sought an instructional approach that could provide structured linguistic support while encouraging more active participation in English speaking lessons.

Storytelling offers a potentially useful response to these challenges because it connects language with characters, events, emotions, and meaningful contexts. Digital storytelling can provide opportunities for learners to plan, rehearse, revise, and present oral content while also promoting engagement, creativity, problem solving, and academic achievement (Hung et al., 2012; Robin, 2008; Sadik, 2008; Yang & Wu, 2012). In language education, it has been associated with increased motivation, repeated oral practice, and improved oral production (Bai & Xian, 2024; Hava, 2021; Razmi et al., 2014; Zhussupova & Shadiev, 2023).

Integrating ChatGPT into storytelling activities may extend these benefits. The tool can support learners in brainstorming ideas, developing plots, generating contextually relevant vocabulary, refining grammatical structures, and rehearsing possible responses. Through iterative prompting, students can revise story content and adapt generated language to their proficiency level and communicative intentions. Emerging studies on AI-supported digital storytelling suggest that generative AI can assist teachers in developing EFL materials and help learners construct creative narratives (Belda-Medina & Goddard, 2024; Chen, 2024). Research on ChatGPT in language education has also identified potential benefits for engagement, autonomy, pronunciation learning, and individualized feedback (Karataş et al., 2024; Kohnke et al., 2023; Mompean, 2024; Szabó & Szoke, 2024).

However, the use of ChatGPT in speaking instruction also raises pedagogical and ethical concerns. Learners may become overly dependent on AI-generated language, accept inaccurate output without critical evaluation, or use generated content without developing their own ideas. AI systems may also reproduce linguistic or cultural biases, while younger learners may need substantial guidance in prompt formulation, content selection, and responsible use (Jeon et al., 2024; Law, 2024). ChatGPT should therefore function as a scaffold within carefully designed communicative activities rather than replace interaction with teachers or peers.

The pedagogical rationale for ChatGPT-supported storytelling can be understood through social constructivism, which views learning as a process of interaction, mediation, and scaffolded participation in meaningful activity (Palincsar, 1998; Vygotsky, 1978). In this study, ChatGPT served as an additional mediational resource, while the teacher organized the tasks, monitored students' use of generated content, and facilitated peer interaction. Storytelling provided a communicative context in which learners could collaboratively construct meaning and transform AI-generated suggestions into their own spoken performances. This approach is also consistent with communicative language teaching, which emphasizes learner-centred interaction and meaningful language use (Canale, 1983; Savignon, 2002).

In addition to learning outcomes, students' acceptance of the technology is important because even a potentially useful tool may have limited educational value if learners consider it difficult, irrelevant, or unsuitable for continued use. The Technology Acceptance Model proposes that perceived usefulness and perceived ease of use influence users' attitudes and intentions to adopt a technology (Davis, 1989; Davis et al., 1989). Later extensions further emphasize the relationship between user perceptions, behavioural intention, and actual technology use (Venkatesh & Bala, 2008; Venkatesh & Davis, 2000). In the present study, the model was used to examine whether lower-secondary students perceived ChatGPT-supported storytelling as useful, manageable, and appropriate for future speaking practice.

Although research on ChatGPT in ELT is expanding rapidly, several gaps remain. Much of the existing literature has focused on university students, pre-service teachers, academic writing, or general perceptions of GenAI. Empirical evidence involving younger secondary-school learners remains comparatively limited. In addition, fewer quasi-experimental studies have examined the effects of ChatGPT-supported storytelling on multiple dimensions of speaking performance. Research combining speaking outcomes with learners' technology acceptance is also limited, even though improved performance does not necessarily mean that students perceive an intervention as useful, accessible, or sustainable.

To address these gaps, this study investigated the effects of ChatGPT-supported storytelling on the English speaking performance and technology-related attitudes of Vietnamese seventh-grade students. Two intact classes participated: one experimental group receiving ChatGPT-supported storytelling instruction and one control group receiving conventional speaking instruction. Speaking performance was assessed in terms of fluency and interaction, vocabulary, grammar, content and relevance, and pronunciation, intonation, and stress. Students' attitudes were examined through perceived usefulness, perceived ease of use, and intention to continue using the technology.

Accordingly, the study addressed the following research questions:

1. To what extent does ChatGPT-supported storytelling improve the English speaking performance of Vietnamese seventh-grade students compared with conventional speaking instruction?
2. What are students' attitudes toward ChatGPT-supported storytelling in terms of perceived usefulness, perceived ease of use, and intention to use the tool for future speaking practice?

By addressing these questions, the study contributes quasi-experimental evidence from an under-researched lower-secondary EFL context, connects ChatGPT-supported storytelling with specific dimensions of speaking performance, and integrates performance assessment with the Technology

Acceptance Model. The findings may inform teachers, curriculum designers, and school leaders seeking to integrate GenAI into communicative speaking instruction in a structured, age-appropriate, and pedagogically responsible manner.

2. Materials and Methods

2.1. Research Design

This study employed a quantitative quasi-experimental pre-test–post-test control-group design to examine the effects of ChatGPT-supported storytelling on the English speaking performance of Vietnamese lower-secondary students. A quasi-experimental design was considered appropriate because the participants belonged to two intact classes and could not be randomly reassigned without disrupting the school’s regular timetable. The design enabled the researchers to compare changes within each group over time and differences between the experimental and control groups after the instructional intervention.

Two classes participated in the study. Class 7A7 was assigned as the experimental group and received ChatGPT-supported storytelling instruction, whereas class 7A6 served as the control group and continued to receive conventional presentation-based speaking instruction. Both groups completed a speaking pre-test before the intervention and an equivalent post-test after the instructional period. Students in the experimental group also completed a post-intervention questionnaire based on the Technology Acceptance Model (TAM) to report their perceived usefulness, perceived ease of use, and intention to continue using ChatGPT-supported storytelling. The thesis identifies these two outcomes—speaking performance and technology-related attitudes—as the principal variables of the investigation.

The instructional intervention was implemented over 10 weeks, including two speaking sessions per week. Week 1 was used for the pre-test; Weeks 2–9 were devoted to instructional activities; and Week 10 was used for the post-test and administration of the questionnaire.

2.2. Research Setting

The study was conducted at Dao Vien Secondary School in Bac Ninh Province, Vietnam, during the first semester of the 2025–2026 academic year. At the time of the study, the school had 1,146 students, of whom 285 were enrolled in Grade 7 across seven classes. The school was selected because it had the facilities necessary to implement technology-supported instruction and because its teachers were seeking alternative approaches to address students’ limited confidence and participation in English speaking activities.

English was taught as a foreign language within the Vietnamese national curriculum. Although the participating students had studied English since primary school, classroom observations and previous assessment results indicated that many continued to experience difficulty with vocabulary, grammar, fluency, pronunciation, and the logical organization of spoken ideas. Some students were also reluctant to speak in front of classmates. These conditions provided an appropriate setting for examining whether technology-supported storytelling could offer additional linguistic scaffolding and opportunities for oral practice.

2.3. Participants

The participants were 80 seventh-grade students, all approximately 12 years old, from two intact classes. The control group consisted of 40 students from class 7A6, including 15 boys and 25 girls. The experimental group consisted of 40 students from class 7A7, including 18 boys and 22 girls.

The two classes were selected through convenience sampling because the researcher was responsible for teaching both classes and had received permission from the school administration to conduct the

intervention. The students had comparable prior experience with the same Grade 7 English curriculum and conventional group-presentation activities. Previous semester results suggested broadly similar English proficiency levels, although the experimental class had a slightly lower initial speaking performance. The thesis reports that 25 students in class 7A7 and 20 students in class 7A6 obtained speaking scores below six points before the intervention.

To reduce potential assessor bias, the researcher conducted the teaching but did not serve as the sole evaluator of the pre-test and post-test performances. Two senior members of the school's foreign language department, each holding TESOL qualifications and having more than 10 years of teaching experience, independently assessed the students' speaking performances using the same rating criteria.

2.4. Instructional Materials

2.4.1. Curriculum materials

The instructional content was drawn from the Grade 7 *Global Success* English curriculum. The intervention focused on three thematic units: Unit 2: *Healthy Living*; Unit 3: *Community Service*; Unit 4: *Music and Arts*

Both groups studied the same curricular topics and received the same amount of instructional time. The difference between the two conditions concerned the instructional approach rather than the core curriculum content. The experimental group used ChatGPT-supported storytelling activities, whereas the control group followed conventional presentation-based speaking activities.

2.4.2. ChatGPT-supported storytelling materials

ChatGPT was incorporated as a supportive tool for constructing and practising stories related to the curriculum topics. It was not used as a substitute for teacher instruction or student production. Students used teacher-guided prompts to: (1) brainstorm ideas and select story topics; (2) construct characters, settings, and plot sequences; (3) obtain suggestions for relevant vocabulary and grammatical structures; (4) develop and revise scripts; (5) rehearse spoken stories; (6) participate in role-plays and group presentations; (7) record oral performances for subsequent feedback; and (8) discuss or debate the plausibility and relevance of stories created by other groups.

The instructional design treated ChatGPT as a form of scaffolding that could assist learners during idea generation, language preparation, rehearsal, and revision. This approach is consistent with social constructivist principles, according to which learning develops through mediation, guidance, and interaction within meaningful tasks (Palincsar, 1998; Vygotsky, 1978). It also reflects communicative language teaching by requiring students to adapt linguistic resources to meaningful contexts and use English collaboratively rather than merely reproduce isolated language forms (Canale & Swain, 1980; Littlewood, 1981; Richards, 2006).

During Weeks 2 and 3, students were introduced to story construction and used ChatGPT to generate and record short stories associated with Unit 2. During Weeks 4 and 5, they created stories related to Unit 3 and delivered group oral presentations. During Weeks 6 and 7, the activities expanded to scriptwriting, role-play, impromptu speaking, home-based video recording, and teacher feedback. During Weeks 8 and 9, the students completed Unit 4 activities involving role-play, script development, pronunciation practice, storytelling, and classroom discussion.

The control group studied the same topics through the school's conventional speaking method. Students prepared and delivered group presentations without using ChatGPT-supported story generation, AI-guided script development, or the structured storytelling procedures applied in the experimental group.

2.5. Data Collection Instruments

Two instruments were employed: a speaking performance test administered before and after the intervention and a post-intervention TAM-based questionnaire administered to the experimental group.

2.5.1. Speaking pre-test and post-test

The pre-test was administered to both groups before the instructional intervention to establish their initial speaking performance. Students worked in groups of five and completed the same speaking topic and task. Although the task was conducted in groups, each student received an individual score to reflect differences in personal speaking performance.

The post-test was administered to both groups at the same time after the intervention. Students in the control group completed a conventional group-presentation task, whereas students in the experimental group completed a storytelling-based speaking task supported by their experience of using ChatGPT. The post-test content was aligned with the Grade 7 *Global Success* curriculum and was designed to be comparable with the pre-test in task type and level of difficulty. The thesis confirms that students worked in groups of five but were assessed individually.

Speaking performance was assessed across five dimensions: (1) fluency and interaction; (2) vocabulary; (3) grammar; (4) content and relevance; and (5) pronunciation, intonation, and stress.

These dimensions reflect the multidimensional nature of speaking performance, which involves linguistic accuracy, discourse organization, comprehensibility, interaction, and real-time language processing (Brown & Abeywickrama, 2019; Bygate, 1987; Fulcher, 2003; Luoma, 2004).

Each dimension was rated on a four-point scale ranging from 1, representing a very low level of performance, to 4, representing a very high level. The maximum overall score was therefore 20 points. The same rubric was used for the pre-test and post-test and was provided to both assessors to support consistent evaluation. The rating scale was adapted from the British Council speaking-assessment specimen used in the thesis.

2.5.2. TAM-based questionnaire

A post-intervention questionnaire was administered to the 40 students in the experimental group to investigate their attitudes toward ChatGPT-supported storytelling. The instrument was structured around the Technology Acceptance Model, which proposes that perceived usefulness and perceived ease of use contribute to users' attitudes and intentions to adopt a technology (Davis, 1989; Davis et al., 1989; Venkatesh & Davis, 2000).

The questionnaire contained 11 items across three constructs:

Construct	Number of items	Focus
Perceived usefulness	4	Access to learning resources, support for speaking development, learning effectiveness, and efficient use of learning time
Perceived ease of use	4	Ease of learning to use the tool, accessing resources, recording spoken work, and developing stories
Intention to use	3	Willingness to continue using ChatGPT, use its learning features, and participate in future ChatGPT-supported speaking activities

Students responded on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The instrument was adapted from an earlier study identified in the thesis and reviewed by experts for content validity. Its internal consistency was examined using Cronbach's alpha.

2.6. Data Collection Procedure

Before data collection, the researcher presented the study plan to the school administration and obtained permission to conduct the intervention. The participating students were informed of the study procedures, and consent was obtained before their data were collected. Student information and assessment results were treated confidentially and used only for research purposes.

The data collection process consisted of four stages.

Stage 1: Pre-testing. In Week 1, both classes completed the speaking pre-test. Students first participated in interaction activities and then delivered group presentations. Individual performances were rated using the common speaking rubric.

Stage 2: Instructional intervention. From Weeks 2 to 9, the experimental group participated in ChatGPT-supported storytelling instruction, while the control group studied the same curriculum content through conventional presentation-based lessons. Both classes received two speaking sessions per week and equivalent instructional time.

Stage 3: Post-testing. In Week 10, both groups completed the post-test. The same speaking dimensions and four-point rating scale were used to assess each student individually.

Stage 4: Attitude survey. Immediately after the post-test, students in the experimental group completed the 11-item TAM-based questionnaire. The questionnaire examined their perceptions of the tool's usefulness, ease of use, and suitability for future speaking practice.

2.7. Data Analysis

The quantitative data were initially entered into Microsoft Excel and subsequently analysed using SPSS. Descriptive statistics were calculated for both the speaking tests and questionnaire responses.

For the speaking-test data, the analysis included: minimum and maximum scores; means; standard deviations; pre-test and post-test score differences; and comparisons across the five speaking-performance dimensions.

A paired-samples *t* test was used to examine pre-test–post-test changes within each group. An independent-samples *t* test was used to compare the experimental and control groups. Statistical significance was established at $p < .05$. The thesis specifies the use of both paired-samples and independent-samples *t* tests for evaluating within-group and between-group differences.

Questionnaire responses were analysed using frequencies, percentages, mean scores, and standard deviations for each item and each TAM construct. Cronbach's alpha was calculated to evaluate internal consistency. The thesis applied a minimum acceptable alpha coefficient of .70 and a corrected item–total correlation threshold of .30.

The three questionnaire constructs were interpreted separately to determine:

1. whether students considered ChatGPT-supported storytelling useful for English speaking;
2. whether they considered the tool easy to operate and integrate into learning tasks; and

3. whether they intended to continue using it in future speaking practice.

2.8. Ethical Considerations

Permission to conduct the study was obtained from the school administration before the intervention began. Participation and data collection were conducted with the consent of the participants. The students' identities, test scores, and questionnaire responses were kept confidential and used solely for academic research. The classroom teacher delivered the instruction, whereas independent assessors evaluated the speaking performances to reduce possible teacher-assessor bias.

3. Results and Discussion

3.1. Results

This section presents the findings in relation to the two research questions. The first analysis examined changes in students' English speaking performance before and after the intervention. The second analysis examined the experimental-group students' attitudes toward ChatGPT-supported storytelling in terms of perceived usefulness, perceived ease of use, and intention to use.

3.1.1. Overall speaking performance

Table 1 presents the overall pre-test and post-test results for the experimental and control groups.

Table 1. Overall pre-test and post-test speaking scores

Group	Test	N	Minimum	Maximum	Mean	SD	Within-group <i>p</i>
Control	Pre-test	40	7	15	10.90	1.35	< .001
Control	Post-test	40	7	13	9.88	1.44	
Experimental	Pre-test	40	8	15	10.83	1.45	< .001
Experimental	Post-test	40	10	16	12.40	1.46	

At the pre-test stage, the mean scores of the control group ($M = 10.90$, $SD = 1.35$) and the experimental group ($M = 10.83$, $SD = 1.45$) were very similar. The difference of only 0.07 points suggests that the two groups began the study with broadly comparable levels of speaking performance.

After the intervention, the two groups followed opposite patterns. The experimental group's mean score increased from 10.83 to 12.40, representing an improvement of 1.57 points. By contrast, the control group's mean score declined from 10.90 to 9.88, a decrease of 1.02 points. The within-group pre-test–post-test comparisons reported in the thesis were statistically significant at $p < .05$.

These results indicate that the experimental group demonstrated improved speaking performance after participating in ChatGPT-supported storytelling, whereas students receiving conventional presentation-based instruction did not show a corresponding improvement. The findings therefore provide a positive answer to the first research question.

3.1.2. Changes in the control group's speaking components

Table 2 presents the pre-test and post-test results for the five assessed dimensions in the control group.

Table 2. Speaking-component scores in the control group

Speaking component	Pre-test mean	Post-test mean	Mean change	<i>p</i>
Fluency and interaction	2.08	1.88	−0.20	.0189
Vocabulary	2.15	2.02	−0.13	.016
Grammar	2.25	2.12	−0.13	.009
Content and relevance	2.20	2.10	−0.10	.0103
Pronunciation, intonation, and stress	2.22	1.75	−0.47	< .001

All five dimensions declined between the pre-test and post-test. The smallest decline occurred in content and relevance, which decreased by 0.10 points. Vocabulary and grammar each decreased by 0.13 points, while fluency and interaction decreased by 0.20 points.

The greatest decline occurred in pronunciation, intonation, and stress, which fell from 2.22 to 1.75, representing a reduction of 0.47 points. The overall pattern suggests that conventional presentation-based instruction did not produce measurable gains in the assessed speaking components during the study period.

The results section does not establish why the control group's scores declined. Possible explanations such as reduced engagement, task familiarity, test conditions, or variation in student performance should therefore be treated as interpretations rather than direct statistical findings.

3.1.3. Changes in the experimental group's speaking components

Table 3 summarizes the component-level results for the experimental group.

Table 3. Speaking-component scores in the experimental group

Speaking component	Pre-test mean	Post-test mean	Mean change	<i>p</i>
Fluency and interaction	2.08	2.41	+0.33	< .001
Vocabulary	2.18	2.72	+0.54	< .001
Grammar	2.23	2.56	+0.33	< .001
Content and relevance	2.21	2.33	+0.12	.002
Pronunciation, intonation, and stress	2.21	2.44	+0.23	.005

Unlike the control group, the experimental group improved across all five dimensions. The largest improvement occurred in vocabulary, which increased by 0.54 points, from 2.18 to 2.72. Fluency and interaction and grammar each increased by 0.33 points. Pronunciation, intonation, and stress improved by 0.23 points, while content and relevance showed the smallest increase, at 0.12 points.

All five component-level changes were reported as statistically significant at $p < .05$.

The improvement in vocabulary may reflect the central role that ChatGPT played in suggesting words, expressions, and alternative ways of developing story content. Improvements in fluency and interaction may also have been supported by repeated storytelling, group rehearsal, role-play, and opportunities to revise spoken content. However, because the study did not isolate the effects of individual intervention components, improvements cannot be attributed exclusively to any single ChatGPT function.

The relatively modest improvement in content and relevance indicates that organizing an extended story coherently may remain challenging for seventh-grade learners even when linguistic and technological support is available. Nevertheless, the consistent upward pattern across all five dimensions suggests that

ChatGPT-supported storytelling was associated with broader speaking development rather than improvement in only one isolated area.

3.1.4. Reliability of the attitude questionnaire

Before the questionnaire results were interpreted, the internal consistency of its three constructs was examined using Cronbach's alpha.

Table 4. Internal consistency of the questionnaire constructs

Construct	Number of items	Cronbach's alpha
Perceived usefulness	4	.719
Perceived ease of use	4	.771
Intention to use	3	.804

Cronbach's alpha values ranged from .719 to .804. The corrected item-total correlations ranged from .354 to .677, exceeding the threshold of .30 applied in the study. The three scales were therefore retained for subsequent descriptive analysis.

The intention-to-use construct obtained the highest internal-consistency coefficient, followed by perceived ease of use and perceived usefulness. These values indicate acceptable consistency among the items used to measure each construct.

3.1.5. Students' attitudes toward ChatGPT-supported storytelling

Table 5 presents the descriptive results for the 11 questionnaire items.

Table 5. Students' attitudes toward ChatGPT-supported storytelling

Construct and item	Mean	SD
Perceived usefulness 1	3.83	0.844
Perceived usefulness 2	3.87	0.686
Perceived usefulness 3	4.08	0.888
Perceived usefulness 4	4.33	0.694
Perceived ease of use 1	3.90	0.778
Perceived ease of use 2	3.93	0.859
Perceived ease of use 3	3.75	0.776
Perceived ease of use 4	3.90	0.778
Intention to use 1	3.93	0.797
Intention to use 2	3.83	0.781
Intention to use 3	3.93	0.859

All item means exceeded 3.75 on the five-point scale, indicating generally positive attitudes toward the intervention.

The four perceived-usefulness items produced an estimated construct mean of 4.03. The highest-rated item in the entire questionnaire was PU4 ($M = 4.33$, $SD = 0.694$), which concerned the ability of ChatGPT to save time when students created stories. PU3 also received a high rating ($M = 4.08$), suggesting that students valued the tool's support for exploring and constructing story contexts. The remaining usefulness

items received means of 3.83 and 3.87, indicating favorable perceptions of the tool's contribution to learning resources, vocabulary, grammatical structures, and virtual interaction.

The four perceived-ease-of-use items produced an estimated construct mean of 3.87. The highest score in this category was 3.93. Students generally reported that the tool was manageable and enabled them to explore learning contexts and prepare story content. The lowest-rated questionnaire item was PE3 ($M = 3.75$, $SD = 0.776$). Although this score remained positive, it suggests that some students may have experienced greater difficulty when searching for resources, formulating commands, controlling speaking speed, or using suggestions to maintain an uninterrupted narrative.

The three intention-to-use items produced an estimated construct mean of 3.90. Two items obtained means of 3.93, indicating that students were willing to continue using ChatGPT-supported storytelling for speaking practice. The remaining item obtained a mean of 3.83 and reflected students' desire for teachers to incorporate the tool into future English speaking lessons.

Taken together, the questionnaire findings provide a positive answer to the second research question. The students generally considered ChatGPT-supported storytelling useful, reasonably easy to use, and suitable for continued learning.

3.2. Discussion

3.2.1. Effects of ChatGPT-supported storytelling on speaking performance

The first major finding was that students who participated in ChatGPT-supported storytelling improved their overall speaking performance, while the control group showed a decline. The experimental group's overall mean increased by 1.57 points, with statistically significant improvements across fluency and interaction, vocabulary, grammar, content and relevance, and pronunciation, intonation, and stress. The contrast between the groups suggests that the combination of generative-AI support and structured storytelling created more productive conditions for speaking development than conventional presentation-based instruction.

This finding is consistent with the broader view that ChatGPT can operate as a pedagogical assistant by supplying contextualized language resources, supporting revision, and extending opportunities for practice (Ahn et al., 2024; Kohnke et al., 2023; Moorhouse, 2024). ChatGPT does not itself produce speaking competence, but its interactive functions may reduce some of the cognitive and linguistic demands involved in preparing oral content. Students can request vocabulary, examples, alternative structures, story continuations, or simplified language and then adapt these suggestions to their own performances.

The largest improvement occurred in vocabulary. This result is plausible given that students repeatedly used ChatGPT to search for expressions, develop storylines, and identify language relevant to the topics *Healthy Living*, *Community Service*, and *Music and Arts*. Generative AI can provide rapid access to language resources and context-sensitive examples, potentially helping learners move beyond the limited vocabulary available in textbooks or personal notes (Kohnke et al., 2023; Law, 2024; Lo et al., 2024).

The vocabulary result is also consistent with digital-storytelling research showing that narrative construction can encourage learners to select, organize, and reuse language in meaningful contexts (Robin, 2008; Sadik, 2008). Storytelling gives vocabulary a functional role: words are not learned as isolated units but are selected to describe characters, actions, settings, problems, and resolutions. AI support may strengthen this process by making relevant lexical resources immediately available during story planning and revision.

Fluency and interaction improved by 0.33 points. This improvement may be associated with the repeated oral production embedded in the intervention. Students brainstormed in groups, rehearsed their stories, completed role-plays, recorded videos, responded to classmates, and revised their performances following feedback. Digital storytelling has previously been associated with increased opportunities for oral rehearsal and presentation, which can contribute to greater confidence and smoother delivery (Bai & Xian, 2024; Razmi et al., 2014; Zhussupova & Shadiev, 2023).

From a communicative language teaching perspective, these activities moved speaking practice beyond the reproduction of predetermined sentences. Students used English to negotiate story content, explain ideas, coordinate group performances, and respond to other groups. Such activities are consistent with the view that communicative competence develops through meaningful language use and interaction rather than through grammatical knowledge alone (Canale & Swain, 1980; Littlewood, 1981; Richards, 2006).

Grammar also increased by 0.33 points. ChatGPT may have assisted students by suggesting sentence structures, reformulating problematic expressions, and providing model language relevant to the stories. However, this result should not be interpreted as evidence that exposure to AI-generated sentences automatically produces grammatical development. The instructional value depended on students examining, selecting, adapting, and orally practising the suggestions under teacher guidance. Without such mediation, learners could simply copy generated content without understanding its form or use.

Pronunciation, intonation, and stress improved by 0.23 points. This result aligns with research suggesting that ChatGPT and related AI tools can provide supplementary resources for L2 pronunciation learning (Mompean, 2024). Rehearsal, recording, repeated speaking, and listening to language models may help learners notice differences between intended and actual production. Nevertheless, the improvement was smaller than that observed for vocabulary, indicating that pronunciation development may require more sustained auditory modelling, corrective feedback, and focused practice than textual story generation alone can provide.

Content and relevance increased by only 0.12 points, the smallest change among the five dimensions. Story organization is a complex performance requiring learners to coordinate ideas, linguistic resources, sequencing, and audience awareness. While ChatGPT can suggest plots and contexts, learners must still evaluate whether the generated material is logical, relevant, culturally appropriate, and suitable for their proficiency level. This finding reinforces the need for teacher guidance in selecting and adapting AI-generated content.

The results also support the pedagogical potential of digital storytelling reported by Hung et al. (2012), Robin (2008), Sadik (2008), and Yang and Wu (2012). Story-based tasks can integrate language learning with creativity, problem solving, collaboration, and meaningful production. More recent work has similarly identified AI-supported storytelling as a means of facilitating narrative development and creativity in EFL education (Belda-Medina & Goddard, 2024; Chen, 2024).

3.2.2. Interaction, scaffolding, and learner participation

The findings may also be interpreted through social constructivism. The intervention did not involve students working individually with ChatGPT throughout the entire learning process. Instead, the tool was embedded in teacher-guided, group-based storytelling activities. Students constructed stories collaboratively, shared linguistic resources, rehearsed together, and responded to peer and teacher feedback.

From a social constructivist perspective, learning occurs through interaction and mediated participation in meaningful activities (Palincsar, 1998; Vygotsky, 1978). In the present study, scaffolding came from several sources: the teacher, peers, story structures, curriculum topics, and ChatGPT-generated

suggestions. ChatGPT therefore functioned as one component of a broader instructional system rather than as an autonomous teacher.

This interpretation is important because the gains cannot be attributed solely to access to the technology. The intervention combined technological support with repeated practice, collaborative learning, role-play, recording, classroom presentation, and teacher feedback. The improvement may therefore reflect the cumulative effect of a structured pedagogical design.

The role of the teacher remained essential. Students at lower-secondary level may not yet possess the linguistic proficiency or AI literacy necessary to judge the accuracy and appropriateness of all generated outputs. Teacher mediation was required to help them formulate suitable prompts, evaluate language, avoid overdependence, and transform generated suggestions into personally meaningful spoken content. This is consistent with the argument that GenAI should complement rather than replace language teachers (Cogo et al., 2024; Kaya, 2024; Kohnke et al., 2023).

3.2.3. Students' perceptions of usefulness

The second major finding was that students perceived ChatGPT-supported storytelling as useful. The estimated construct mean was approximately 4.03, and the highest-rated item concerned saving time in story creation.

This result is consistent with the Technology Acceptance Model, in which perceived usefulness refers to the extent to which users believe that a technology can improve their performance (Davis, 1989; Davis et al., 1989). Students appeared to value ChatGPT because it gave them rapid access to ideas, story contexts, vocabulary, sentence structures, and interactive support. These functions reduced the time required to begin a speaking task and helped students overcome the common problem of not knowing what to say.

The findings correspond with studies reporting that ChatGPT can expand access to learning resources, provide immediate linguistic assistance, and facilitate personalized learning (Karataş et al., 2024; Kohnke et al., 2023; Law, 2024). They also align with AI-supported storytelling research suggesting that generative tools can assist learners and teachers in developing narrative materials and creative content (Belda-Medina & Goddard, 2024; Chen, 2024).

Perceived usefulness may also have been strengthened by the close alignment between ChatGPT activities and the students' assessed speaking tasks. Students did not use the technology for an unrelated or optional exercise. They used it to develop vocabulary, grammar, story content, and oral performances corresponding directly to their curriculum and assessment criteria. This curricular alignment likely made the educational purpose of the tool visible to learners.

3.2.4. Students' perceptions of ease of use

Students also reported positive perceptions of ease of use, with an estimated construct mean of approximately 3.87. This finding suggests that most participants were able to interact with ChatGPT, obtain suggestions, and use the outputs in storytelling activities without excessive difficulty.

According to TAM, perceived ease of use concerns the extent to which users believe that operating a technology requires relatively little effort (Davis, 1989). Ease of use can also influence perceived usefulness and subsequent intentions to adopt a system (Venkatesh & Davis, 2000). In the present study, students' positive ratings may reflect the conversational format of ChatGPT, which allows users to enter requests in natural language rather than learn complex technical procedures.

Nevertheless, the lowest item mean was 3.75. This result indicates that ease of use was positive but not uniform across all functions. Seventh-grade students may still experience difficulty formulating effective prompts, judging the relevance of generated answers, navigating unfamiliar vocabulary, or using suggestions to maintain speaking speed and narrative continuity.

This finding supports the need for explicit AI-literacy instruction. Learners should be taught how to formulate clear prompts, request age-appropriate language, check generated information, revise unsuitable responses, and recognize that AI output may be inaccurate or biased. Such preparation is especially important for younger learners and is consistent with calls for teacher readiness and responsible AI integration in ELT (Jeon et al., 2024; Kaya, 2024; Law, 2024).

3.2.5. Intention to continue using ChatGPT-supported storytelling

The intention-to-use construct received an estimated mean of approximately 3.90. Students generally wished to continue using the tool and expressed support for its future incorporation into speaking lessons.

This result is consistent with TAM-based accounts proposing that favorable perceptions of usefulness and ease of use contribute to behavioral intention (Davis et al., 1989; Venkatesh & Bala, 2008; Venkatesh et al., 2003). Students who believed that ChatGPT helped them develop stories, access language resources, and practise speaking without excessive difficulty were correspondingly more willing to use it again.

The positive intention scores also support research showing that GenAI may promote learner autonomy and provide opportunities for language practice beyond regular classroom time (Szabó & Szoke, 2024). Because ChatGPT is available outside scheduled lessons, students can potentially continue brainstorming, rehearsing, and revising spoken content independently.

However, intention to use should not be interpreted as evidence that unrestricted or unsupervised use is pedagogically desirable. High willingness to use an AI tool may coexist with risks of dependence, reduced original thinking, inappropriate copying, or uncritical acceptance of generated information. Future classroom implementation should therefore combine student access with clear guidance concerning acceptable use, verification, authorship, privacy, and academic responsibility.

3.2.6. Overall interpretation of the findings

The combined test and questionnaire results indicate that ChatGPT-supported storytelling was associated with both improved speaking performance and favorable learner attitudes. The performance results show gains across all five assessed speaking dimensions, while the questionnaire indicates that students considered the approach useful, manageable, and worthy of continued use.

The findings support the view that generative AI is most educationally valuable when embedded in a structured pedagogy. In this study, the technology was integrated with curriculum-based topics, collaborative storytelling, repeated speaking practice, role-play, recording, presentation, peer interaction, and teacher feedback. The observed improvement should therefore be understood as the outcome of a pedagogically organized human–AI learning process rather than as a direct consequence of ChatGPT alone.

At the same time, the results should be interpreted within the limits of the available evidence. The study involved 80 students from one secondary school and used intact rather than randomly assigned classes. The thesis reported statistically significant pre-test–post-test changes, but the available results did not provide effect sizes or a fully reported statistical comparison of the two groups' gain scores. The study also relied on a post-intervention self-report questionnaire and did not include interviews or classroom-observation data capable of explaining students' experiences in greater depth.

Consequently, the findings provide promising rather than definitive evidence. They suggest that ChatGPT-supported storytelling can be a useful supplementary approach to teaching English speaking at the lower-secondary level, provided that it is implemented with clear learning objectives, teacher mediation, collaborative practice, and responsible-use guidance.

4. Conclusion

This study examined the effects of ChatGPT-supported storytelling on the English speaking performance and technology-related attitudes of Vietnamese seventh-grade students. Using a quasi-experimental pre-test–post-test design, the study compared an experimental group receiving ChatGPT-supported storytelling instruction with a control group receiving conventional presentation-based speaking instruction.

The findings showed a clear difference between the two groups after the intervention. The experimental group's overall speaking score increased from 10.83 to 12.40, representing a gain of 1.57 points, whereas the control group's mean score decreased from 10.90 to 9.88, a reduction of 1.02 points. The experimental group also improved across all five assessed dimensions: fluency and interaction, vocabulary, grammar, content and relevance, and pronunciation, intonation, and stress. The largest improvement occurred in vocabulary, followed by fluency and interaction and grammar. These results indicate that ChatGPT-supported storytelling was associated with broader development in students' speaking performance rather than improvement in only one isolated component.

The questionnaire findings also revealed generally positive student attitudes toward the intervention. All item means were above 3.75 on a five-point scale. Students particularly valued ChatGPT for saving time in story creation, supporting the development of story contexts, providing access to language resources, and facilitating future speaking practice. The three questionnaire constructs demonstrated acceptable internal consistency, with Cronbach's alpha values of .719 for perceived usefulness, .771 for perceived ease of use, and .804 for intention to use. These results suggest that students regarded ChatGPT-supported storytelling as useful, manageable, and suitable for continued use in English speaking lessons.

Taken together, the findings support the pedagogical value of integrating ChatGPT into structured storytelling activities. The positive outcomes were not produced by the technology alone but by the combination of AI-generated support, curriculum-based topics, collaborative learning, repeated oral practice, role-play, recording, presentation, peer interaction, and teacher feedback. In this instructional model, ChatGPT functioned as a scaffold for idea generation, vocabulary development, grammatical support, story organization, and rehearsal, while the teacher remained responsible for guiding students, monitoring the quality of generated content, and ensuring that the activities remained appropriate to the learners' age and proficiency level.

The study contributes to the emerging literature on generative AI in English language teaching by providing evidence from a lower-secondary EFL context, an area that remains less extensively investigated than higher education. It also contributes by linking ChatGPT-supported storytelling with specific speaking dimensions and by combining performance assessment with the Technology Acceptance Model. This provides a more comprehensive understanding of both what students achieved and how they perceived the technology used during the intervention.

Despite these positive findings, the results should be interpreted cautiously. The study involved only 80 students from one secondary school, used intact classes rather than random assignment, and lasted for 10 weeks. The study also relied mainly on quantitative data and did not include interviews, detailed classroom observations, or long-term follow-up measures. In addition, the available statistical results did not report effect sizes or a complete between-group analysis of gain scores. Therefore, the findings provide promising but not definitive evidence of the effectiveness of ChatGPT-supported storytelling.

Future research should involve larger and more diverse samples, longer intervention periods, and mixed-methods designs combining tests, questionnaires, interviews, observations, and learner reflections. Further studies should also examine whether improvements are sustained over time, how different prompt-training strategies affect speaking development, and which elements of the intervention contribute most strongly to learning outcomes. Particular attention should be given to responsible AI use, including prompt literacy, verification of generated content, avoidance of overdependence, protection of student data, and preservation of learners' own voices and creativity.

In conclusion, ChatGPT-supported storytelling appears to be a promising supplementary approach for developing English speaking performance and encouraging positive learner attitudes at the lower-secondary level. When integrated into a carefully designed communicative learning environment and supported by active teacher mediation, it can provide students with meaningful opportunities to generate ideas, expand linguistic resources, practise speaking, collaborate with peers, and engage more confidently in English oral communication.

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