

Research Article

Digital Video-Supported Flipped Instruction and EFL Writing Development Among First-Year English Majors at A University in Hanoi

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Abstract

This study investigated the use of digital video-supported flipped instruction to enhance EFL writing development among first-year English majors in Vietnamese higher education. An action research design was employed with 45 first-year English-major students at Hanoi University of Natural Resources and Environment. The intervention lasted ten weeks and integrated pre-class digital videos with in-class writing practice, peer interaction, and teacher feedback. Data were collected through pre- and post-writing tests, a student questionnaire, and semi-structured interviews. Quantitative results showed significant improvements in students' overall writing performance, particularly in content development, organization, vocabulary use, and grammatical accuracy. Qualitative findings further revealed that students perceived the videos as useful for understanding writing structure, preparing ideas before class, and revising their drafts more effectively. The questionnaire and interview data also indicated positive learner attitudes, especially regarding flexibility, motivation, confidence, and engagement. The findings suggest that digital video-supported flipped instruction can be a promising approach for improving EFL writing instruction in Vietnamese university contexts.

Keywords

digital videos; flipped classroom; EFL writing; English majors; Vietnamese higher education

1. Introduction

English writing proficiency has become increasingly important in higher education, particularly in contexts where English functions as a medium for academic access, professional communication, and global knowledge exchange. As English continues to serve as a global lingua franca, university students are expected not only to understand English but also to use it effectively to express ideas, construct arguments, report information, and participate in academic and professional communities (Graddol, 2006; Hyland, 2003). Among the four language skills, writing is often considered one of the most complex because it requires learners to

coordinate multiple linguistic and cognitive processes, including idea generation, organization, vocabulary selection, grammatical accuracy, coherence, cohesion, and revision (Cumming, 2001; Hyland, 2003). For university students, these abilities are particularly essential, as writing competence supports academic achievement, future employment, and lifelong learning.

In Vietnamese higher education, however, English writing remains a challenging area for many students. Although English has been given increasing attention in university curricula, students often encounter difficulties when

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producing written texts in English. These difficulties may include limited vocabulary, weak grammatical control, poor organization of ideas, inappropriate use of cohesive devices, and a lack of confidence in developing extended written responses. In many EFL classrooms, writing instruction is still frequently associated with teacher explanation, grammar-based exercises, model imitation, and controlled practice. While these approaches may help students acquire basic linguistic forms, they do not always provide sufficient opportunities for meaningful writing practice, interaction, feedback, and revision. As a result, students may struggle to develop the ability to write coherent and purposeful texts independently.

This issue is particularly relevant to university students at Hanoi University of Natural Resources and Environment, where students come from disciplines such as natural resources, environmental management, land administration, climate change, and related fields. For these students, English writing is not only a general language requirement but also an important academic and professional skill. They may need to write paragraphs, reports, summaries, emails, project descriptions, and other forms of written communication in their future study and work. However, many students are non-English majors and may have limited exposure to systematic writing instruction. Therefore, there is a need for more flexible, practical, and student-centered approaches that can help them improve their writing performance while also encouraging independent learning and active classroom participation.

One pedagogical approach that has received increasing attention in recent years is the flipped classroom model. Unlike traditional instruction, in which teachers present new knowledge in class and students complete practice tasks at home, the flipped classroom reverses this sequence. Students are introduced to instructional content before class, often through digital videos or other online learning materials, while classroom time is used for active learning activities such as discussion, problem-solving, collaborative work, practice, and feedback (Bergmann & Sams, 2012). This model is considered particularly suitable for language learning because it allows students to prepare basic knowledge before class and gives teachers more time to guide students through higher-order learning activities during class time.

Digital videos play a central role in many flipped classroom designs. Through videos, students can access explanations of writing concepts, observe examples, review language structures, and learn writing strategies outside class. Compared with one-time classroom explanation, video-based learning offers greater flexibility because students can pause, replay, and review the content according to their own needs and learning pace. This feature is especially beneficial in mixed-ability university classrooms, where students may differ considerably in English proficiency, learning habits, and

confidence. In addition, digital videos provide multimodal input by combining visual, auditory, and textual elements, which may enhance comprehension and support learner engagement (Chauhan, 2017). When combined with in-class writing practice and teacher feedback, digital videos can help shift writing instruction from passive reception to active production and revision.

Previous studies have suggested that flipped learning can contribute to student engagement, autonomy, and learning outcomes in higher education (O'Flaherty & Phillips, 2015). In the field of English language teaching, the flipped classroom has also been discussed as a promising approach for creating more interactive and learner-centered environments. However, despite the growing interest in flipped learning, there remains a need for more context-specific empirical evidence on how digital videos within a flipped classroom model can support English writing development among Vietnamese university students, especially non-English-major students in specialized universities. Much of the existing discussion has focused on general benefits of flipped learning, while less attention has been paid to how this model affects specific writing sub-skills such as idea development, paragraph organization, coherence, cohesion, language accuracy, and revision. Moreover, students' attitudes toward this approach need further investigation, as their perceptions of usefulness, motivation, difficulty, and engagement may influence the success of flipped classroom implementation.

To address this gap, the present study investigates the use of digital videos in a flipped classroom model to enhance English writing skills among university students at Hanoi University of Natural Resources and Environment. The study focuses on both learning outcomes and learner perceptions. Specifically, it examines whether the integration of pre-class digital videos with in-class writing activities and teacher feedback can improve students' writing performance. It also explores students' attitudes toward the use of digital videos and flipped classroom practices in English writing instruction. By doing so, the study aims to provide empirical evidence on the pedagogical value of flipped learning in a Vietnamese higher education context.

This study makes several contributions. First, it contributes to the literature on technology-supported English language teaching by examining the role of digital videos in writing instruction. Second, it extends research on flipped classroom pedagogy by focusing specifically on English writing skills rather than general language achievement. Third, it provides practical implications for English teachers, curriculum designers, and university administrators who seek to promote more active, flexible, and student-centered approaches to English teaching in higher education. Finally, by focusing on students at Hanoi University of Natural Resources and

Environment, the study offers context-based insights into how flipped learning may be adapted to the needs of university students in specialized academic disciplines.

The study is guided by the following research questions:

1. *To what extent does the use of digital videos in a flipped classroom model improve university students' English writing skills at Hanoi University of Natural Resources and Environment?*
2. *What are university students' attitudes toward the use of digital videos in the flipped classroom model for improving their English writing skills?*

2. LITERATURE REVIEW

2.1 English writing in EFL higher education

Writing is widely regarded as one of the most complex skills in second and foreign language learning because it requires learners to coordinate linguistic, cognitive, and rhetorical abilities. Unlike speaking, which often allows immediate negotiation of meaning, writing requires learners to plan ideas, organize information, select appropriate vocabulary, control grammatical structures, and revise their texts to achieve clarity and coherence. For EFL learners, this process is particularly demanding because they must express ideas in a language that they do not use as their primary means of communication (Hyland, 2003).

In higher education, English writing plays an important role in students' academic and professional development. University students are expected to use writing not only to complete classroom assignments but also to communicate ideas, report information, summarize academic content, and prepare for future workplace communication. Therefore, writing competence is closely connected with academic success, employability, and participation in global professional contexts. As Hyland (2019) notes, writing has become increasingly important in academic and professional settings, especially as students are required to communicate complex ideas through both traditional and digital formats.

However, many EFL university students still face difficulties in writing. These difficulties often include limited vocabulary, weak grammatical control, poor paragraph organization, inadequate use of cohesive devices, and limited ability to revise drafts effectively. In Vietnamese EFL contexts, writing instruction has often been influenced by grammar-focused and teacher-centered practices. As a result, students may understand sentence-level grammar but still struggle to develop coherent paragraphs or extended written texts. Besides, Vietnamese learners often experience challenges in producing well-organized writing because classroom practices may not provide enough opportunities for planning, drafting, feedback, and revision.

This issue is relevant to university students at Hanoi University of Natural Resources and Environment. Many students are non-English majors studying fields such as environmental management, land administration, natural resources, climate change, and related disciplines. For these students, English writing is not only a general language requirement but also a useful skill for academic tasks and future professional communication. Therefore, writing instruction should help them develop practical writing sub-skills, including idea generation, paragraph organization, cohesion, language accuracy, and revision.

2.2. Process-oriented writing instruction

Writing can be approached from different pedagogical perspectives, including product-based, genre-based, and process-oriented approaches. In traditional product-based instruction, students are often expected to imitate model texts and produce a final written product. While this approach can help learners understand text models and language forms, it may not sufficiently support students in developing the strategies needed to plan, draft, and revise their writing independently.

By contrast, process-oriented writing instruction views writing as a recursive process involving several stages, including brainstorming, outlining, drafting, revising, editing, and publishing. Tribble (1996) emphasizes that writing should not be treated as a one-step activity but as a developmental process in which learners gradually improve their texts through reflection and feedback.

In EFL classrooms, a process-oriented approach is particularly useful because it allows teachers to scaffold students' writing development. Students can receive support at different stages of writing, from generating ideas to improving organization and correcting language errors. Peer feedback and teacher feedback also play an important role in helping students notice weaknesses in their writing and make meaningful revisions. Therefore, process-oriented instruction is closely aligned with the aims of the present study, which focuses on improving students' writing skills through digital videos, in-class writing practice, and feedback.

2.3. Writing assessment in EFL contexts

Writing assessment is essential for measuring students' development and identifying specific areas for improvement. In EFL writing research, analytic scoring rubrics are commonly used because they allow teachers and researchers to evaluate different components of writing separately. Rather than giving only a single overall score, analytic rubrics provide detailed information about learners' strengths and weaknesses.

Several well-known rubrics have been used in EFL writing

assessment. Jacobs et al. (1981) proposed an analytic scoring profile that evaluates writing based on content, organization, vocabulary, language use, and mechanics. Brown and Bailey (1984) also developed a rubric focusing on organization, logical development of ideas, grammar, punctuation, spelling, and style. Cohen (1994) similarly emphasized a multi-trait approach to writing assessment, including content, organization, vocabulary, grammar, and mechanics.

These criteria are relevant to the present study because they reflect the main components of writing performance that the flipped classroom intervention seeks to improve. Content refers to the relevance and development of ideas. Organization concerns the logical arrangement of information and the clarity of paragraph structure. Vocabulary reflects the range and appropriateness of word choice. Grammar refers to sentence accuracy and control of language structures. Mechanics includes spelling, punctuation, capitalization, and formatting. By using analytic assessment, the study can examine whether students improve not only in general writing performance but also in specific aspects of writing.

2.4. Digital videos in language learning

Digital videos have become an important instructional tool in technology-supported language learning. They combine visual and auditory input, which can help learners process information more effectively. According to Mayer (2005), multimedia learning is more effective when learners receive information through both visual and verbal channels, as this can support comprehension and retention. In writing instruction, digital videos can be used to explain writing concepts, model paragraph structure, introduce cohesive devices, demonstrate revision strategies, and provide examples of effective writing.

One major advantage of digital videos is flexibility. Students can watch videos before class, pause when necessary, replay difficult parts, and review the content at their own pace. This is especially useful for mixed-proficiency university classes, where students may differ in their language ability, learning speed, and confidence. For weaker students, videos provide repeated exposure to writing knowledge. For stronger students, videos allow faster preparation and more independent learning.

However, digital videos are not automatically effective. Their pedagogical value depends on how they are designed and integrated into the course. Videos need to be concise, clear, focused, and directly connected to in-class learning activities. If videos are too long, too theoretical, or not linked to classroom tasks, students may watch them passively or may not watch them at all. Therefore, in the present study, digital videos are used not as optional supplementary materials but as structured pre-class input that prepares students for in-class writing activities.

2.5. The flipped classroom model

The flipped classroom model is a pedagogical approach that reverses the traditional sequence of instruction. In a conventional classroom, teachers usually present new content during class time and students complete practice tasks at home. In a flipped classroom, students first study instructional content before class, often through videos, readings, or online materials. Class time is then used for active learning activities such as discussion, collaboration, problem-solving, writing practice, peer feedback, and teacher guidance (Bergmann & Sams, 2012).

This model is strongly associated with active learning and learner autonomy. Lage et al. (2000) explain that flipped learning allows students to engage with instructional materials at their own pace before class. As a result, classroom time can be used more effectively for application and interaction. Tucker (2012) also emphasizes that the teacher's role changes from being a direct transmitter of knowledge to becoming a facilitator who supports students while they apply what they have learned.

In EFL writing instruction, the flipped classroom model has several potential benefits. First, it allows basic writing knowledge, such as paragraph structure, topic sentences, supporting details, cohesive devices, and revision strategies, to be introduced before class. Second, it creates more time for students to practise writing during class. Third, it enables teachers to provide immediate feedback while students are working on their drafts. Fourth, it encourages peer interaction, which can help students learn from each other's ideas and writing strategies.

Nevertheless, flipped learning also presents challenges. It requires students to complete pre-class preparation independently, which may be difficult for learners who lack motivation or self-regulation skills. It also requires reliable access to digital devices and the internet. In addition, teachers need to invest time in preparing or selecting suitable videos and designing meaningful classroom activities. Therefore, successful flipped classroom implementation depends on the careful alignment of pre-class videos, in-class practice, assessment, and feedback.

2.6. Students' attitudes toward flipped learning

Students' attitudes are an important factor in determining the success of flipped classroom implementation. Since flipped learning requires students to prepare before class and participate actively during class, their perceptions of the model can influence their engagement and learning outcomes. If students perceive digital videos as useful, accessible, and relevant to classroom tasks, they may be more willing to complete pre-class learning. On the other hand, if they view pre-class preparation as burdensome or unclear, their

participation may be limited.

In writing instruction, students' attitudes may be shaped by several factors. These include the clarity of the videos, the difficulty of the writing tasks, the amount of teacher support, the usefulness of peer feedback, and the perceived improvement in writing ability. Students may respond positively to flipped learning because it allows them to review lessons before class, receive more feedback, and spend more class time practising writing. However, some students may experience difficulties if they are not used to independent learning or if they lack confidence in collaborative classroom activities.

For this reason, investigating students' attitudes is necessary in addition to measuring writing performance. Improvement in test scores alone does not fully explain whether the flipped classroom model is practical, acceptable, and sustainable in a specific learning context. By exploring students' perceptions, the present study can provide a more comprehensive understanding of how university students experience digital videos and flipped classroom writing instruction.

2.7. Previous studies on flipped classrooms and EFL writing

Previous studies have provided evidence that flipped classroom instruction can support students' English writing development. In China, Zhang and Xu (2019) investigated the effect of a flipped classroom supported by digital videos on students' writing performance. Their findings showed that students in the flipped classroom group made greater progress in writing organization and coherence than those taught through traditional instruction.

In a Jordanian EFL context, Sawalha (2018) found that the flipped classroom model improved students' writing fluency, organization, and argumentation. The study emphasized that classroom interaction, peer feedback, and teacher support helped students construct more logical and coherent essays. Kim et al. (2014) also reported that flipped learning increased students' engagement and improved their writing performance, especially in drafting and revising. These findings suggest that flipped classrooms may be particularly useful when writing instruction includes opportunities for collaboration, feedback, and revision.

Recent studies in Southeast Asian contexts have also shown positive effects of flipped learning on EFL writing. Ariani and Kustati (2024) examined the impact of a flipped digital classroom on Indonesian university students' writing skills and found that the model significantly improved students' writing scores. Their study also highlighted the role of student engagement in maximizing learning outcomes. Likewise, Kawinkoonlasate (2024) investigated a digital-flipped

classroom with Thai EFL learners and reported improvements in writing accuracy, organization, motivation, and satisfaction. These studies suggest that flipped learning can be effective in EFL contexts where students need more flexible learning resources and more active writing practice.

Overall, international studies indicate that flipped classroom instruction, especially when supported by digital videos, can improve different aspects of writing performance, including organization, coherence, argumentation, drafting, and revision. However, many studies have focused on overall writing performance rather than examining specific writing sub-skills in detail. In addition, students' attitudes are sometimes discussed only briefly, although they are important for understanding the effectiveness and sustainability of flipped learning.

2.8. Research gap

Although previous studies have shown that the flipped classroom model can improve EFL writing performance, several gaps remain. First, many studies have examined the effect of flipped learning on general writing achievement, while fewer have focused on specific writing components such as idea development, organization, coherence, cohesion, vocabulary, grammar, mechanics, and revision. Second, although digital videos are commonly used in flipped classrooms, more research is needed on how they support pre-class preparation and in-class writing practice. Third, in the Vietnamese context, further empirical evidence is needed in higher education, especially among non-English-major university students.

This gap is particularly important in the context of Hanoi University of Natural Resources and Environment. Students at this university need English writing for both academic and professional purposes, but many of them may face difficulties because they are non-English majors and have limited opportunities for systematic writing practice. Therefore, it is necessary to examine whether digital videos in a flipped classroom model can improve their writing skills and how they perceive this approach.

The present study addresses this gap by investigating the use of digital videos in a flipped classroom model to enhance English writing skills among university students at Hanoi University of Natural Resources and Environment. Specifically, it examines the extent to which this approach improves students' writing performance and explores students' attitudes toward the use of digital videos and flipped classroom practices in writing instruction. In doing so, the study contributes to research on technology-supported EFL writing instruction and provides practical implications for English teaching in Vietnamese higher education.

3. Research methodology

3.1. Research design

This study employed a classroom-based action research design to investigate the use of digital videos in a flipped classroom model for improving English writing skills among first-year English-major students at Hanoi University of Natural Resources and Environment. Action research was selected because it enables teacher-researchers to identify a practical classroom problem, implement an instructional intervention, observe its effects, and reflect on the outcomes for pedagogical improvement (Burns, 2010).

The study followed one action research cycle consisting of planning, action, observation, and reflection. In the planning stage, students' writing difficulties were identified through classroom observation and initial writing performance. In the action stage, digital videos and flipped classroom activities were implemented. In the observation stage, students' writing performance and responses to the intervention were monitored through tests, a questionnaire, and interviews. In the reflection stage, the collected data were analyzed to evaluate the effectiveness of the intervention and draw implications for future writing instruction.

Quantitative data were collected through pre- and post-writing tests and a questionnaire, while qualitative data were gathered through semi-structured interviews. This combination allowed the study to examine measurable changes in students' writing performance and explore their attitudes toward the use of digital videos in the flipped classroom model.

3.2. Research context

The study was conducted at Hanoi University of Natural Resources and Environment, a public university in Vietnam. The participants were enrolled in the English language major and were taking an English writing course during their first year of study. At this stage, students were expected to develop fundamental academic writing abilities, including generating ideas, organizing paragraphs, using appropriate vocabulary and grammar, applying cohesive devices, and revising written texts.

Although the participants were English-major students, many still faced difficulties in writing. Common problems included limited idea development, weak paragraph organization, inappropriate use of cohesive devices, grammatical errors, and insufficient revision. These challenges provided the pedagogical basis for applying a flipped classroom model supported by digital videos. The intervention was designed to move basic writing instruction to the pre-class stage and use class time for guided writing

practice, peer interaction, and teacher feedback.

3.3. Participants

The participants were 45 first-year English-major university students at Hanoi University of Natural Resources and Environment. They were selected through convenience sampling because they were enrolled in the writing course taught by the researcher during the implementation period. This sampling method was appropriate for classroom-based action research, which aims to improve teaching and learning in a specific instructional context.

All participants were Vietnamese students who had studied English before entering university. However, their writing proficiency varied. Some students were able to express basic ideas in English, while others had difficulty organizing paragraphs, developing supporting details, using accurate grammatical structures, and revising their drafts. Before the intervention, the students had not experienced a systematic flipped classroom model in their English writing course.

To improve the reliability of writing assessment, students' pre- and post-test papers were assessed using the same analytic rubric. A second English lecturer was invited to support the scoring process. The two raters assessed the writing scripts independently and then discussed major scoring differences to reach agreement.

3.4. Flipped classroom intervention

The intervention was implemented over ten weeks. It integrated digital videos, pre-class learning, in-class writing practice, peer feedback, and teacher feedback. The intervention was organized around two main stages: pre-class preparation and in-class application.

Before each lesson, students watched short digital videos related to specific writing sub-skills. These videos introduced and demonstrated key writing strategies, including brainstorming ideas, outlining main points, writing topic sentences, developing supporting details, organizing paragraphs, using cohesive devices, improving vocabulary, correcting grammatical errors, and revising drafts. Students could watch the videos at their own pace and replay difficult parts when necessary.

During class, students applied what they had learned from the videos through guided writing activities. Instead of spending most class time on teacher explanation, the lessons focused on writing practice, group discussion, peer review, and teacher feedback. Students worked on writing tasks step by step, from idea generation and outlining to drafting and revision. This design allowed the teacher to provide more immediate support and created more opportunities for students to practise writing actively.

3.5. Data collection instruments

Three instruments were used to collect data: writing tests, a questionnaire, and semi-structured interviews.

3.5.1. Writing tests

Pre- and post-writing tests were administered to measure changes in students' writing performance before and after the intervention. The pre-test was conducted before the flipped classroom implementation, while the post-test was administered after the ten-week intervention.

In each test, students were asked to write a paragraph or short essay on a given topic appropriate to their course level. The same task type and assessment criteria were used in both tests to ensure comparability. Students' writing was assessed using an analytic rubric adapted from Cohen (1994). The rubric included five criteria: content, organization, vocabulary, grammar, and mechanics.

Content assessed the relevance and development of ideas. Organization evaluated paragraph structure, logical arrangement, and coherence. Vocabulary focused on word choice, range, and appropriateness. Grammar assessed sentence structure and grammatical accuracy. Mechanics examined spelling, punctuation, and capitalization. The analytic rubric made it possible to evaluate students' improvement in specific aspects of writing rather than relying only on an overall score.

3.5.2. Questionnaire

A questionnaire was used to explore students' attitudes toward the use of digital videos in the flipped classroom model. The questionnaire was adapted from Gardner's Attitude/Motivation Test Battery framework (Gardner, 2004) and modified to fit the purpose of the present study.

The questionnaire included Likert-scale items measuring students' perceptions of interest, usefulness, motivation, engagement, confidence, effort, and difficulties when learning writing through digital videos and flipped classroom activities. Each item was rated on a five-point scale ranging from strongly disagree to strongly agree. The questionnaire was administered in Vietnamese to ensure that students clearly understood the items and could express their opinions accurately.

3.5.3. Semi-structured interviews

Semi-structured interviews were conducted after the intervention to further explore students' experiences and attitudes toward the flipped classroom model. The interviews focused on students' perceived writing improvement, motivation, engagement, and challenges when learning through digital videos. Participants were purposefully selected to reflect different levels of writing performance and different

questionnaire response patterns. The interviews were conducted in Vietnamese, transcribed, translated into English, and analyzed thematically.

3.6. Data collection procedure

The data collection process was conducted over ten weeks. Before the intervention, students completed the pre-writing test. This test provided baseline data on their initial writing performance.

During the intervention, students watched digital videos before class and completed writing activities during class. Each week focused on one or more writing sub-skills. In class, students practised writing, discussed ideas with peers, received feedback, and revised their drafts. The teacher monitored students' participation and provided guidance when necessary.

After the intervention, students completed the post-writing test. The post-test was used to examine whether students' writing performance improved after participating in the flipped classroom intervention. Students then completed the questionnaire to report their attitudes toward the use of digital videos and flipped classroom activities. Finally, selected students participated in semi-structured interviews to provide deeper explanations of their learning experiences.

3.7. Data analysis

Quantitative and qualitative data were analyzed separately and then interpreted together to provide a comprehensive understanding of the findings.

For the writing tests, students' pre- and post-test scores were analyzed using SPSS. Descriptive statistics, including means and standard deviations, were calculated to describe students' writing performance before and after the intervention. Paired-samples t-tests were then conducted to determine whether the differences between pre- and post-test scores were statistically significant. The analysis was conducted for the overall writing score and for each writing criterion, including content, organization, vocabulary, grammar, and mechanics. The significance level was set at $p < .05$.

For the questionnaire, descriptive statistics were used to analyze students' responses. Means and standard deviations were calculated for each item to identify overall trends in students' attitudes. Higher mean scores indicated more positive perceptions of the flipped classroom model, while lower mean scores suggested less favorable attitudes or possible challenges.

For the interview data, thematic analysis was conducted following Braun and Clarke's (2006) procedure. The analysis involved familiarizing with the data, generating initial codes, identifying themes, reviewing themes, defining and naming

themes, and reporting the findings. Coding was guided by the research focus but also allowed new themes to emerge from students' responses. The interview findings were used to explain and support the quantitative results, particularly in relation to students' motivation, perceived improvement, engagement, and difficulties.

4. Findings and Discussion

4.1. Findings

4.1.1. Effects of the flipped classroom model on students' writing performance

To examine the extent to which digital videos in a flipped classroom model improved students' English writing skills, paired-samples t-tests were conducted to compare students' pre-test and post-test writing scores. The analysis focused on four writing criteria: content, organization, vocabulary, and grammar. The overall writing score was also analyzed. Table 1 summarizes the results.

Table 1. Pre-test and post-test writing performance

Writing criterion	Pre-test Mean	Post-test Mean
Content	3.13	3.69
Organization	2.69	3.40
Vocabulary	3.18	3.47
Grammar	3.04	3.58
Overall writing score	12.04	14.13

The results indicate that students' writing performance improved significantly after the ten-week flipped classroom intervention. The overall writing score increased from 12.04 to 14.13, with a mean gain of 2.09 points. This improvement was statistically significant, $t(44) = 8.96$, $p < .005$, with a large effect size. This suggests that the integration of digital videos and in-class writing practice had a meaningful positive effect on students' overall writing development.

Among the four writing criteria, organization showed the largest improvement, increasing from 2.69 to 3.40. This suggests that students became better at arranging ideas logically, structuring paragraphs, and maintaining coherence in their writing. Content also improved significantly, indicating that students were able to develop ideas more clearly and provide more relevant supporting details after the intervention. Grammar showed a similarly significant increase, suggesting that repeated exposure to video explanations and

guided in-class practice helped students improve grammatical accuracy. Vocabulary also improved, although the gain was smaller than the other criteria. This may indicate that vocabulary development requires longer exposure and more extensive practice than a ten-week intervention can provide.

The interview data supported these quantitative findings. Students reported that the videos helped them understand how to organize their writing more clearly. One participant explained, "The videos helped me understand how to structure a piece of writing more clearly, so my writing is no longer disorganized like before." Another student stated, "I improved the most in organizing paragraphs and distinguishing main and supporting ideas. I used to write in a disorganized way." These responses suggest that digital videos provided students with clearer models of writing structure, which then supported their in-class writing practice.

Students also reported improvement in grammar and vocabulary. One student noted, "I felt more confident in grammar because the videos explained things thoroughly and had clear examples." Another student commented, "I improved the most in vocabulary because I learned many new words from the videos." These reflections indicate that the videos functioned not only as pre-class input but also as a source of repeated exposure to language forms and writing strategies.

Overall, the findings for the first research question show that digital videos in a flipped classroom model contributed to significant improvement in students' writing performance, especially in organization, content development, and grammar.

4.1.2. Students' attitudes toward digital videos in the flipped classroom model

To answer the second research question, a 14-item questionnaire was administered after the intervention. The questionnaire examined students' attitudes toward the use of digital videos in the flipped classroom model. The mean scores ranged from 3.73 to 4.09, indicating generally positive attitudes across all items.

Table 2. Summary of students' attitudes toward the flipped classroom model

Attitude dimension	Mean range	Interpretation
Interest and engagement	3.84 - 4.00	Students found the model interesting, enjoyable, and engaging.
Understanding of writing techniques	3.80 - 4.02	Students believed videos helped them understand and apply writing

		strategies.
Confidence and motivation	3.82 - 4.02	Students felt more confident and wanted to continue using videos.
Flexibility of learning	4.09	Students highly valued learning at their own pace.
Ease and stress reduction	3.73 - 3.80	Students found the approach easier and less stressful than traditional learning.

The highest-rated item was “I like the flexibility of watching videos at home before coming to class” ($M = 4.09$). This finding shows that students valued the opportunity to study at their own pace, replay difficult sections, and prepare for writing lessons before class. Another highly rated item was “Watching digital videos helps me understand writing techniques and structure more clearly” ($M = 4.02$), suggesting that students perceived the videos as useful instructional tools.

Students also expressed positive attitudes toward the motivational value of the model. The item “I would like to continue learning through digital videos in future writing assignments” received a mean score of 4.02, indicating that many students accepted and supported the use of digital videos in writing instruction. Similarly, the item “I feel motivated to write more because of the use of digital videos in lessons” received a mean score of 3.89.

The interviews provided deeper explanations for these questionnaire results. Students stated that the flipped classroom model encouraged them to prepare before class and become more responsible for their learning. One participant said, “I prepared some ideas before class, so when doing the task, I didn’t spend much time thinking.” Another student shared, “I felt more responsible because I had to take notes and review them before class.” These comments suggest that digital videos promoted learner autonomy and helped students enter the classroom with greater readiness.

Students also reported increased confidence. One student stated, “I feel more confident when expressing my ideas in English.” Another explained, “I felt more confident in writing because I clearly understood the requirements and how to do the task.” These responses suggest that pre-class exposure to writing content reduced uncertainty and helped students approach writing tasks with more confidence.

However, students also identified several challenges. Some mentioned unstable internet access, distractions when studying at home, and the fast pace of certain videos. One student suggested that the videos should be shorter and include Vietnamese subtitles. Another recommended adding more practice exercises after each video. These comments indicate that although students generally held positive attitudes, the effectiveness of the model depends on careful

video design, accessibility, and learner support.

4.2. Discussion

4.2.1. The impact of digital videos on writing development

The findings show that the flipped classroom model supported by digital videos had a positive effect on first-year English-major students’ writing performance. Significant improvements were found in content, organization, vocabulary, grammar, and overall writing scores. This result supports previous studies showing that flipped learning can improve students’ writing performance by shifting direct instruction outside class and using classroom time for practice, interaction, and feedback (Zhang & Xu, 2019; Zhao & Wang, 2020).

The strongest improvement was found in organization. This suggests that the flipped classroom model was particularly effective in helping students understand how to structure ideas logically. In traditional writing classes, students often receive teacher explanations but have limited time to apply writing strategies in class. In this study, students first learned about writing structure through digital videos and then practised organizing ideas, outlining, drafting, and revising during class. This combination appears to have helped them move from passive understanding to active application.

The improvement in content also suggests that students became better at developing ideas. This may be because pre-class videos gave them initial exposure to the topic and writing strategies before they began writing. As a result, they had more time in class to discuss ideas, receive feedback, and improve their drafts. This finding is consistent with process-oriented views of writing, which emphasize brainstorming, drafting, feedback, and revision as essential stages of writing development (Tribble, 1996).

Grammar also improved significantly. This may be explained by the repeated and flexible nature of video-based learning. Students could pause, replay, and review grammar explanations before class, which helped reinforce their understanding. In class, they then applied these structures in actual writing tasks. This finding is consistent with Mayer’s (2005) multimedia learning theory, which suggests that combining visual and auditory input can support comprehension and retention.

Vocabulary showed a statistically significant but smaller improvement. This result is understandable because vocabulary development usually requires extensive exposure, repeated use, and long-term practice. A ten-week intervention may help students use vocabulary more appropriately in specific writing tasks, but broader lexical development may require a longer period of instruction.

Although the results are positive, they should be interpreted

carefully. Since this was a classroom-based action research study without a control group, the findings show improvement after the intervention but should not be generalized as strong causal evidence. Nevertheless, the consistency between the test results, questionnaire responses, and interview data provides credible evidence that the flipped classroom model contributed positively to students' writing development in this context.

4.2.2. Students' positive attitudes toward flipped writing instruction

The findings also show that students held generally positive attitudes toward the use of digital videos in the flipped classroom model. Students valued the flexibility of watching videos before class, the clarity of video explanations, and the opportunity to come to class better prepared. These results are consistent with Kim et al. (2014), who found that flipped learning can increase learner autonomy and engagement.

One important finding is that students felt more confident in writing after using digital videos. Writing is often a stressful skill for EFL learners because it requires them to generate ideas, organize information, and use accurate language at the same time. In this study, videos helped reduce some of this pressure by allowing students to preview the lesson content before class. When students understood the task requirements and writing strategies in advance, they felt more prepared and less anxious.

The findings also suggest that flipped learning encouraged more active participation. Students reported taking notes, preparing ideas, and asking more questions in class. This supports O'Flaherty and Phillips' (2015) argument that flipped classrooms can create more interactive and student-centered learning environments. In writing instruction, this is especially valuable because students need time to practise, discuss, receive feedback, and revise their writing.

At the same time, the interview findings reveal several implementation challenges. Some students experienced technical difficulties, while others found it difficult to concentrate when studying at home. Some also suggested that videos should be shorter, slower, and supported with subtitles or follow-up exercises. These findings are important because they show that flipped learning is not effective simply because videos are provided. Its success depends on the quality of the videos, the clarity of learning tasks, students' access to technology, and the connection between pre-class preparation and in-class activities.

4.2.3. Contribution to the Vietnamese higher education context

This study contributes to research on flipped writing instruction in Vietnamese higher education in several ways. First, it provides empirical evidence from first-year English-

major students at Hanoi University of Natural Resources and Environment, a context that has received limited attention in previous research. Second, it focuses specifically on writing performance rather than general English achievement. Third, it combines test results, questionnaire data, and interview findings to provide a more complete understanding of both learning outcomes and learner attitudes.

The findings suggest that digital videos can be useful for supporting writing instruction at university level, particularly when they are integrated into a structured flipped classroom design. Videos helped students prepare before class, while in-class activities allowed them to practise writing, interact with peers, and receive feedback. This combination appears to be especially helpful for developing writing organization, content development, and grammar accuracy.

However, the study also highlights the need for careful pedagogical design. For future implementation, digital videos should be concise, clearly structured, level-appropriate, and directly connected to classroom activities. Teachers should also provide guidance on how students should watch videos, take notes, and prepare for class. In addition, follow-up exercises after each video may help ensure that students engage actively with the pre-class materials.

5. Conclusion

This study examined the use of digital videos in a flipped classroom model to improve English writing skills among first-year English-major students at Hanoi University of Natural Resources and Environment. Using a mixed-methods action research design, the study collected data from pre- and post-writing tests, a questionnaire, and semi-structured interviews. The findings showed that the intervention had a positive impact on students' writing performance, with statistically significant improvements in content, organization, vocabulary, grammar, and overall writing scores. Among these areas, organization showed particularly strong improvement, suggesting that the flipped classroom model was especially useful in helping students understand paragraph structure, logical sequencing, and coherence in writing. These quantitative findings were also supported by interview data, in which students reported clearer understanding of writing structure, better idea development, and greater confidence in grammar and vocabulary use.

The study also found that students held generally positive attitudes toward the use of digital videos in writing instruction. Questionnaire results indicated that students appreciated the flexibility of watching videos before class, the clarity of video explanations, and the opportunity to learn at their own pace. Interview responses further showed that the flipped classroom model encouraged students to prepare before class, take notes, generate ideas in advance, and participate more actively

during writing lessons. These findings suggest that digital videos did not merely function as supplementary learning materials; rather, they played an important role in promoting learner autonomy, motivation, confidence, and engagement.

The study makes several contributions to the field of EFL writing instruction. First, it provides empirical evidence on the effectiveness of digital videos in a flipped classroom model in a Vietnamese higher education context. Second, it contributes to research on technology-supported writing instruction by showing how pre-class video input can be combined with in-class writing practice, peer interaction, and teacher feedback. Third, it highlights the importance of examining both learning outcomes and students' attitudes, as positive learner perceptions can support the successful implementation of flipped learning.

Pedagogically, the findings suggest that English writing teachers should consider using short, focused, and well-structured digital videos to introduce key writing strategies before class. Class time should then be used for practical writing activities, including brainstorming, outlining, drafting, peer review, and revision. However, successful implementation requires careful planning. Videos should be clear, level-appropriate, and directly connected to classroom tasks. Teachers should also provide guidance on how students should watch videos, take notes, and prepare for in-class writing activities.

Despite its contributions, this study has some limitations. First, it was conducted with a relatively small group of students in one university, which limits the generalizability of the findings. Second, the study used one action research cycle over a ten-week period, so the long-term effects of the intervention were not examined. Third, the absence of a control group means that the findings should be interpreted as classroom-based evidence rather than strong causal proof. Future studies could involve larger samples, comparison groups, longer intervention periods, and delayed post-tests to examine whether students' writing improvement can be sustained over time.

Overall, this study concludes that digital videos, when integrated into a carefully designed flipped classroom model, can support the development of university students' English writing skills and foster more positive attitudes toward writing. The model offers a promising approach for making EFL writing instruction more flexible, interactive, and student-centered in Vietnamese higher education.

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