ISSN 1799-2591
Theory and Practice in Language Studies, Vol. 15, No. 8, pp. 2505-2514, August 2025
DOI: https://doi.org/10.17507/tpls.1508.07

Applying e-Portfolios in Improving Writing Skills for Economics Students in Blended Learning Environment in Vietnam

Hoang Thu Ba
Faculty of English, Thuongmai University, Hanoi, Vietnam

***Abstract*—The study aimed to evaluate the effectiveness of applying online portfolios (e-Portfolios) in teaching and learning writing skills among Vietnamese students at economics universities that have implemented blended learning since the COVID-19 period. An experimental study utilizing both quantitative and qualitative data collection and analysis was conducted with two groups of participants from different economics universities in Vietnam. The goal was to provide reliable and highly applicable findings on writing skills based on the framework of the Vietnamese Standardized Test of English Proficiency (VSTEP). The research results confirmed that the application of online platforms offers certain benefits and enhances business learners' writing skills, provided that both teachers and students follow a structured procedure.**

***Index Terms*—e-portfolios, writing skills, blended-learning, economics students, Vietnam**

I. Introduction

Education in Vietnam has recently undergone a significant transformation in the digital age, leading to a series of innovations in teaching and learning with the support of technology. Simultaneously, both teachers and learners need to acquire and master the use of advanced technological pedagogical tools to comprehensively improve their work. Portfolios are not novel, but e-portfolios in the new learning and teaching context of the Fourth Industrial Revolution need to be investigated to determine their effectiveness and the most optimal ways to apply them.

In fact, the integration of technology in educational settings has become increasingly prevalent, and the adoption of electronic portfolios (e-portfolios) has emerged as a promising approach to enhance the development of language skills. The e-portfolio, as a digital repository, allows students to curate and showcase their academic and professional achievements, fostering a deeper connection between their learning, assessment tasks, and the transition into the workforce (Mummalaneni, 2014; Fukunaga, 2018; White, 2019; Ngui et al., 2019; Farrell, 2020).

A thorough review of earlier studies reveals a need for an empirical study to gain insight into the benefits of e-portfolios in upgrading writing skills for economics students in the Vietnamese context, where blended learning is being implemented.

II. Literature Review

Over the past decade, the use of electronic portfolios (e-portfolios) has gained significant traction in educational settings worldwide, including in Vietnam. E-portfolios have been recognized as a powerful tool for supporting student learning, professional development, and authentic assessment. This research paper explores the integration of e-portfolios in enhancing writing skills among university students in Vietnam, examining both the benefits and challenges associated with their implementation.

The use of e-portfolios in the learning process facilitates a more comprehensive and personalized assessment of students' writing proficiency. By enabling students to present a diverse range of written artifacts, including multimedia components, e-portfolios provide a multifaceted platform for demonstrating their growth as writers (Fukunaga, 2018). This approach is particularly beneficial for STEM majors, who may face unique challenges in developing their English writing skills (Fukunaga, 2018).

The integration of e-portfolios in the writing curriculum has been shown to offer numerous benefits. By providing a platform for students to curate and reflect on their writing samples, e-portfolios foster a deeper understanding of the writing process and help students identify areas for improvement (Fukunaga, 2018). Moreover, the multimodal nature of e-portfolios allows students to showcase their writing skills through various media, including text, images, and multimedia, further enhancing their ability to communicate effectively. As students progress through their academic journey, e-portfolios serve as a valuable tool for tracking their growth and development as writers, enabling them to make meaningful connections between their learning and assessment (Kabilan & Khan, 2010; Aydin, 2014; Barrot, 2016).

The effectiveness of e-portfolios in improving writing skills is underpinned by their ability to support self-directed and collaborative learning. Through the process of curating and reflecting on their work, students engage in metacognitive activities that deepen their understanding of key writing concepts, such as rhetorical situations. Furthermore, the

interactive nature of e-portfolios encourages students to seek feedback and engage in peer-to-peer learning, further enhancing their writing proficiency (Fukunaga, 2018).

As educators continue to explore innovative strategies to foster student learning, the adoption of e-portfolios emerges as a promising approach to enhancing writing skills. By leveraging the capabilities of digital technologies, e-portfolios provide a comprehensive and personalized assessment of student learning while promoting self-directed and collaborative learning opportunities that ultimately lead to improved writing proficiency (Kabilan & Khan, 2010; Mummalaneni, 2014; Fukunaga, 2018; White, 2019; McGregor, 2020).

The use of e-portfolios has been explored in a variety of academic contexts, including STEM fields. For example, a study on using e-portfolios in English writing courses for university STEM majors in Japan found that the assignment design, with a series of scaffolding tasks, helped students develop their understanding of rhetorical situations and apply writing concepts to different contexts (Fukunaga, 2018). Similarly, the University of Guelph's School of Engineering piloted the use of e-portfolios within a third-year design course, where students submitted guided reflections on their learning and development of "soft skills" like teamwork and project management (Huang & Hung, 2010; Clemmer et al., 2015).

Despite the potential benefits, the implementation of e-portfolios in the Vietnamese educational context is not without challenges. Research has highlighted issues such as students' limited familiarity with digital technologies, the need for robust infrastructure and technical support, and the potential for increased workload for both students and faculty (Van et al., 2021). Additionally, concerns exist regarding the alignment of e-portfolio assessments with traditional grading systems and the need to ensure that e-portfolios are seamlessly integrated into the overall curriculum.

The introduction of e-portfolios in Vietnam's writing education must also consider the cultural and linguistic nuances of the local context. For instance, Vietnamese students' rhetorical patterns and writing conventions may differ from those commonly found in Western-centric academic writing (Nguyen & Pramoolsook, 2014).

The implementation of e-portfolios to enhance writing skills among university students in Vietnam presents both opportunities and challenges. Careful planning, faculty training, and student support are crucial to ensuring the successful integration of e-portfolios into the writing curriculum. By addressing the unique needs and considerations of the Vietnamese educational context, e-portfolios can become a transformative tool in fostering student engagement, reflection, and growth as writers (Fukunaga, 2018; White, 2019; Nguyen & Pramoolsook, 2014; Beck et al., 2016).

E-portfolios have become increasingly popular among students and professionals as a way to showcase their work, document their learning, and demonstrate their skills. These digital platforms allow users to curate and present their achievements, reflections, and growth over time (White, 2019). One key benefit of using e-portfolios is their ability to facilitate student learning and assessment. E-portfolio tools support students in making connections between their coursework, extracurricular activities, and personal development, leading to a deeper understanding of their own learning process. Furthermore, educators can use e-portfolios to evaluate student learning outcomes, assess skill development, and provide personalized feedback (Clemmer et al., 2015).

III. Methodology

A. Participants

The participants in the study were 80 first-year non-major students from three Vietnamese universities specializing in business fields, including Thuongmai University, National Economics University, and VNU University of Economics and Business. They were randomly selected from basic English courses. Although both male and female students participated, gender was not a significant factor in the research outcomes.

All participants were first-year students, aged 18, majoring in marketing, human resource management, business administration, and logistics. Before participating in the five-week research process, these students took a pre-test to evaluate their English writing skills. The classroom environment for both students and lecturers was the same and was conducted on an online platform. Classes were held once per week, with each session lasting 150 minutes.

Table 1
Participants' Demographic Information

Number of participants in control group	40
Number of participants in experimental group	40
Sex	51 females 29 males
Age	18 to 20
Level of proficiency	Pre-Intermediate
Number of participants from Thuongmai University	30
Number of participants from National Economics University	25
Number of participants from VNU University of Economics and Business.	25

B. Research Method

To determine the impact of e-portfolios— used as a tool to support writing practice and evaluation – on students' writing skills—a quasi-experimental method was applied to two selected online English classes, which were divided into an experimental group and a control group. To assess the homogeneity of these groups, a comprehensive English test was administered at the beginning of the study.

The pre-test was given to both groups. Later in the study, a post-test on the dependent variables was performed for both groups. Data analysis was conducted using the statistical software SPSS 22 and t-tests.

- The quasi-experimental method aimed to compare the results between the experimental and control groups.
- Both quantitative and qualitative methods were used, with SPSS 22 software employed to determine the relationship between the application of e-portfolios and the improvement of writing skills among online students, as well as to determine the level of effectiveness.
- A survey method was also used, involving questionnaires and interviews with students regarding the effectiveness of e-portfolios in improving students' writing skills in an online learning environment.

C. Experiment Process

The experiment process consisted of 5 steps:

a) Selection and Standardization of Research Participants

Since the purpose of the research is to examine the impact of applying the e-portfolio tool to enhance writing skills for non-English-major students, an experimental study was chosen. To ensure uniformity among participants based on their language proficiency level, a writing proficiency assessment was conducted. The test used the email writing format from Part 1 of the Writing Skills section of the VSTEP (Vietnamese Standardized Test of English Proficiency). The participants were divided into a control group and an experimental group, with 40 students in each.

b) Conducting the Writing Pre-Test

Although both participant groups were considered to have the same proficiency level, the study focused specifically on writing skills. Therefore, an email writing test following the VSTEP format was administered. The written tests were then graded by two qualified examiners with expertise in assessing writing according to the VSTEP criteria.

The evaluation criteria were based on the assessment rubric for Task 1 (email writing) in the Writing Skills section of the Vietnamese 6-level Foreign Language Proficiency Framework, with scores ranging from 0 to 10. The final score for each participant was determined by averaging the scores given by the two examiners.

To further ensure the homogeneity of the students' writing abilities, the average scores of the two groups were compared using a t-test.

c) Implementation Phase

Students in both groups participated in a five-week course comprising 30 sessions. These included 15 instructor-led lessons via MS Teams and 15 sessions conducted through the LMS online classroom.

In the control group, students were taught using traditional methods, following the writing guidelines outlined in the textbook and course syllabus. In the experimental group, students formed a Zalo group and were guided on how to create and manage their portfolios. Each week, they completed a writing assignment, uploaded their work to Google Docs or Padlet, and participated in peer review by reading and correcting their classmates' work under the teacher's guidance. The teacher provided feedback, corrected errors, and assessed students' writing assignments.

d) Conducting the Writing Post-Test

After five weeks of instruction using both approaches, a post-test was administered. The test followed the email writing format from Task 1 of the VSTEP Writing Exam to validate the research hypothesis through data analysis. The post-test was assessed by the same two VSTEP examiners who graded the pre-test.

The average scores of both groups were compared using a t-test to determine whether there was a significant difference in post-test results between the two groups. Additionally, to evaluate the effectiveness of each teaching method, a paired-sample t-test was conducted to compare the pre-test and post-test results within each group.

e) Conducting a Student Survey on the Effectiveness of Applying e-Portfolio in Writing Practice

After the study, 40 questionnaires were distributed to students in the experimental group to assess their learning experience with this technique. The survey included statements regarding the experimental process, the use of e-portfolios, and their application in the learning process. The questionnaire included eight evaluation items, rated on a five-point Likert scale from Strongly Agree (5) to Strongly Disagree (1).

IV. RESULTS

A. Results of Pre-Tests

Levene's test indicated equal variances, $F(1, 78) = 0.051$, $p = .821$. An independent-samples t-test showed no significant difference with $t(78) = -0.317$, $p = .752$. Additionally, based on the mean value (M) in Table 2, the test results do not show a significant difference between the two groups. Therefore, the proficiency levels of both groups are equivalent, ensuring suitable conditions for conducting the experiment.

TABLE 2
RESULTS OF DESCRIPTIVE STATISTICS FOR COMPARING PRETEST WRITING COMPETENCE OF THE LEARNERS IN THE EXPERIMENTAL GROUP AND CONTROL GROUP

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
PRE-TEST	EXPERIMENTAL GROUP	40	6.528	.7107	.1124
	CONTROL GROUP	40	6.578	.6978	.1103

TABLE 3
RESULTS OF THE INDEPENDENT SAMPLES TEST FOR COMPARING THE EXPERIMENTAL GROUP AND CONTROL GROUP'S WRITING PRE-TEST SCORES

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PRE TEST	Equal variances assumed	.051	.821	-.317	78	.752	-.0500	.1575	-.3635	.2635
	Equal variances not assumed			-.317	77.974	.752	-.0500	.1575	-.3635	.2635

B. Results of Post-Tests

To verify the effectiveness of applying e-portfolios to improve students' writing skills, an independent-samples t-test was conducted for the post-test. The results in Table 5 show Levene's test is significant ($p < .001$), "Equal variances not assumed" row for the t-test: $t(66.97) = 6.363$, $p < .001$. Additionally, the average score of the experimental group ($M = 7.915$) was higher than that of the control group ($M = 6.9$), demonstrating the positive impact of e-portfolios on students' writing performance.

TABLE 4
RESULTS OF DESCRIPTIVE STATISTICS FOR COMPARING POST-TEST WRITING COMPETENCE OF THE LEARNERS IN THE EXPERIMENTAL GROUP AND CONTROL GROUP

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
POST-TEST	EXPERIMENTAL GROUP	40	7.915	.5498	.0869
	CONTROL GROUP	40	6.900	.8458	.1337

TABLE 5
RESULTS OF THE INDEPENDENT SAMPLES TEST FOR COMPARING THE EXPERIMENTAL GROUP AND CONTROL GROUP'S WRITING POST-TEST SCORES

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
POST-TEST	Equal variances assumed	13.842	.000	6.363	78	.000	1.0150	.1595	.6974	1.3326
	Equal variances not assumed			6.363	66.969	.000	1.0150	.1595	.6966	1.3334

Thus, there is a significant difference in results between the experimental group and the control group after the research activity. This finding confirms that applying e-portfolios to teaching writing skills, particularly in the correspondence genre, is effective for business learners in Vietnamese economics universities. Moreover, it demonstrates higher efficiency compared to the group that did not implement the experimental model.

C. Evaluating the Improvement in Writing Competence Under 4 Writing Assessment Criteria

A paired-sample t-test was conducted to assess improvements in four writing competence criteria: Task Fulfillment (TF), Organization (O), Vocabulary (V), and Grammar (G) in both the pre-test and post-test for both groups.

TABLE 6
RESULTS OF DESCRIPTIVE STATISTICS FOR COMPARING PRE-TEST AND POST-TEST OF CONTROL GROUP UNDER 4 ASSESSMENT CRITERIA OF WRITING COMPETENCE

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TF1	6.450	40	.7828	.1238
	TF2	6.825	40	.8738	.1382
Pair 2	O1	6.525	40	.9055	.1432
	O2	6.900	40	1.0328	.1633
Pair 3	V1	6.650	40	.7696	.1217
	V2	7.000	40	.9337	.1476
Pair 4	G1	6.600	40	.8102	.1281
	G2	6.800	40	.9392	.1485

TABLE 7
RESULTS OF PAIRED SAMPLES CORRELATION FOR COMPARING PRE-TEST AND POST-TEST OF CONTROL GROUP UNDER 4 ASSESSMENT CRITERIA OF WRITING COMPETENCE

		N	Correlation	Sig.
Pair 1	TF1 & TF2	40	.156	.338
Pair 2	O1 & O2	40	.085	.602
Pair 3	V1 & V2	40	.250	.120
Pair 4	G1 & G2	40	.297	.063

TABLE 8
RESULTS OF THE INDEPENDENT SAMPLES TEST FOR COMPARING PRE-TEST AND POST-TEST OF CONTROL GROUP UNDER 4 ASSESSMENT CRITERIA OF WRITING COMPETENCE

		Paired Differences					*t*	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	TF1 - TF2	-.3750	1.0786	.1705	-.7200	-.0300	-2.199	39	.034
Pair 2	O1 - O2	-.3750	1.3144	.2078	-.7954	.0454	-1.804	39	.079
Pair 3	V1 - V2	-.3500	1.0513	.1662	-.6862	-.0138	-2.106	39	.042
Pair 4	G1 - G2	-.2000	1.0427	.1649	-.5335	.1335	-1.213	39	.232

Paired-samples t-tests (Table 8) indicated statistically significant improvements for Task Fulfillment ($t(39) = -2.20$, $p = .034$) and Vocabulary ($t(39) = -2.11$, $p = .042$). No significant improvements were found for Organization ($t(39) = -1.80$, $p = .079$) or Grammar ($t(39) = -1.21$, $p = .232$). These results suggest an improvement in Task Fulfillment and Vocabulary but no significant difference in Organization and Grammar between the pre-test and post-test. The average difference in mean scores for the control group between the two assessments showed a slight increase, ranging from 0.2 to 0.37 points.

TABLE 9
RESULTS OF DESCRIPTIVE STATISTICS FOR COMPARING PRE-TEST AND POST-TEST OF CONTROL GROUP UNDER 4 ASSESSMENT CRITERIA OF WRITING COMPETENCE

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TF1	6.425	40	.8439	.1334
	TF2	7.975	40	.6597	.1043
Pair 2	O1	6.475	40	.9055	.1432
	O2	8.100	40	.6718	.1062
Pair 3	V1	6.625	40	.7742	.1224
	V2	7.975	40	.6597	.1043
Pair 4	G1	6.500	40	.8165	.1291
	G2	7.550	40	.6775	.1071

TABLE 10
RESULTS OF PAIRED SAMPLES CORRELATION FOR COMPARING PRE-TEST AND POST-TEST OF EXPERIMENTAL GROUP UNDER 4 ASSESSMENT CRITERIA OF WRITING COMPETENCE

		N	Correlation	Sig.
Pair 1	TF1 & TF2	40	.342	.031
Pair 2	O1 & O2	40	.004	.979
Pair 3	V1 & V2	40	-.019	.908
Pair 4	G1 & G2	40	-.093	.569

TABLE 11
RESULTS OF THE INDEPENDENT SAMPLES TEST FOR COMPARING PRE-TEST AND POST-TEST OF EXPERIMENTAL GROUP UNDER 4 ASSESSMENT CRITERIA OF WRITING COMPETENCE

		Paired Differences					*t*	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	TF1 - TF2	-1.5500	.8756	.1384	-1.8300	-1.2700	-11.196	39	.000
Pair 2	O1 - O2	-1.6250	1.1252	.1779	-1.9848	-1.2652	-9.134	39	.000
Pair 3	V1 - V2	-1.3500	1.0266	.1623	-1.6783	-1.0217	-8.317	39	.000
Pair 4	G1 - G2	-1.0500	1.1082	.1752	-1.4044	-.6956	-5.992	39	.000

The data in Table 11 shows that the t-test Sig. values for the four pairs in the experimental group are all 0.00 (as $p < .001$), indicating a significant difference in scores between the pre-test and post-test. The average scores across all four criteria—Task Fulfillment, Organization, Vocabulary, and Grammar—increased by more than 1.0 point between the two assessments (see the Mean column in Table 11). Specifically, the scores for Organization (1.63 points) and Task Fulfillment (1.55 points) increased the most, while the lowest increase was observed in Grammar, with a 1.0-point improvement.

Thus, the verification results confirm that applying e-portfolios in teaching and learning writing skills for business learners in Vietnam has been significantly effective based on VSTEP writing competency assessment criteria. The post-experiment scores for Organization and Task Fulfillment were notably higher than the pre-experiment results. Vocabulary and Grammar scores also improved after the experiment, although their increase was not as pronounced as in the other two criteria.

D. Progress Evaluation in Correspondence Writing Competence of Control Group and Experimental Group

A paired-samples-t-test was conducted to evaluate the level of progress in both groups after participating in the learning program. The results indicated that both groups made significant progress in writing skills following the curriculum. However, the degree of improvement differed between the two groups.

For the control group, the t-test Sig. value for the scores before and after the intervention was t(39) = -2.08, p = .044), confirming that students improved after participating in the learning program using traditional methods. However, the difference in average scores between the pre-test (M = 6.578) and post-test (M = 6.90) was only 0.322 points, indicating that the improvement was not substantial (see Table 12 and 13).

TABLE 12
RESULTS OF DESCRIPTIVE STATISTICS FOR COMPARING PRE-TEST AND POST-TEST OF CONTROL GROUP

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	6.578	40	.6978	.1103
	POSTTEST	6.900	40	.8458	.1337

TABLE 13
RESULTS OF THE PAIRED SAMPLES TEST FOR COMPARING PRE-TEST AND POST-TEST OF CONTROL GROUP

		Paired Differences					*t*	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PRE-TEST – POST-TEST	-.3225	.9810	.1551	-.6362	-.0088	-2.079	39	.044

For the experimental group, the t-test Sig. value for the scores before and after participating in the program was $t(39) = -10.19$, $p < .001$), confirming significant progress among students following the experimental program. Additionally, the difference in average scores between the pre-test ($M = 6.528$) and post-test ($M = 7.915$) was approximately 1.39 points, indicating a substantial improvement (see Tables 14 and 15).

TABLE 14
RESULTS OF DESCRIPTIVE STATISTICS FOR COMPARING PRE-TEST AND POST-TEST OF EXPERIMENTAL GROUP

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE-TEST	6.528	40	.7107	.1124
	POST-TEST	7.915	40	.5498	.0869

TABLE 15
RESULTS OF THE PAIRED SAMPLES TEST FOR COMPARING PRE-TEST AND POST-TEST OF EXPERIMENTAL GROUP

		Paired Differences					*t*	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PRE-TEST – POST-TEST	-1.3875	.8612	.1362	-1.6629	-1.1121	-10.190	39	.000

From the analysis, the quantitative investigation confirms a significant improvement in students' correspondence writing skills following the experimental process.

E. Qualitative Results

To evaluate the effectiveness of applying e-portfolios in improving students' writing skills, 40 questionnaires were distributed to students in the experimental group. The questionnaire was designed to include statements about the experimental process, the use of e-portfolios, and their application in the learning process. It consisted of eight items measured on a five-point Likert scale: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1).

TABLE 16
PARTICIPANTS' PERSPECTIVES ON E-PORTFOLIO USE AFTER RESEARCH TREATMENT

Item	After participating in the experiment	Mean
1	I found it easy to understand when I practised writing on Padlet/ Google Docs.	4.2
2	I found it effective for my writing skills when I followed each step in the writing process and ensured the format of my writing as guided.	3.8
3	I was motivated and engaged in cross-checking according to guided criteria.	3.0
4	I could see and learn more from my classmates' writing.	4.0
5	I found it effective after correcting my partners' writing.	3.5
6	I recognized my errors after my writing work was corrected and commented on by my classmates and teacher.	3.6
7	Practising writing through e-portfolios is convenient, easy to follow, and time-saving.	3.9
8	I am more autonomous in practising writing in order to complete my e-portfolio as planned.	3.9

The results indicate that most students positively responded to the questions regarding the experimental process. Questions (1) and (4) received the highest level of agreement, with an average score of 4.0 or higher. Specifically, students found it easy to practice writing on digital platforms such as Padlet or Google Docs and appreciated how e-portfolios allowed them to view and learn from their classmates' writing.

Additionally, questions (7), (2), and (6) were also well-received by students when assessing the benefits of e-portfolios in writing practice. Students found that learning correspondence writing skills through e-portfolios on Google Docs was highly convenient, clear, and time-saving (M = 3.9). They also reported being more proactive in their writing practice when completing e-portfolio tasks according to the planned schedule (M = 3.9). Furthermore, most students acknowledged the effectiveness of following structured writing steps and models provided in the instructions (M = 3.8). Notably, students recognized their mistakes more clearly when their assignments were corrected and commented on by both peers and teachers (M = 3.6).

However, students showed only moderate enthusiasm (M = 3.0) for correcting their classmates' writing based on the teacher's guided criteria. This finding suggests that some students may not yet feel fully prepared or confident in providing peer feedback.

V. DISCUSSION

The study aimed to investigate the effectiveness of applying e-portfolios in teaching correspondence writing skills to business learners in Vietnam. Quantitative analysis confirmed that e-portfolios significantly improved students' writing abilities compared to traditional methods. The results align with previous studies, including Huang and Hung (2010), Kabilan and Khan (2010), Aydin (2014), Clemmer et al. (2015), Wicks and Lumpe (2015), Barrot (2016), van Wyk (2017), Fukunaga (2018), and McGregor (2020).

A distinguishing feature of this research is its evaluation of students' writing ability based on the VSTEP criteria, which aligns with Vietnam's 6-level foreign language competency framework. The study demonstrated measurable improvements in four key writing criteria: Task Fulfillment, Organization, Vocabulary, and Grammar.

With the increasing shift toward online English teaching and learning, both teachers and students often struggle with identifying effective pedagogical tools and methods. The findings suggest that e-portfolios provide a structured and effective approach to enhancing writing skills. Survey results from students in the experimental group further confirmed that e-portfolios facilitate writing improvement, similar to findings in previous studies on writing and other language skills.

The research results have confirmed the effectiveness of applying portfolios in teaching English writing skills to students on online platforms. Therefore, integrating this technique into English language instruction in the Vietnamese context is essential. Through an extensive literature review, the research team identified steps for effectively applying e-portfolios in language teaching and learning. Most researchers, such as Bisovsky and Schaffert (2009) and Shin (2013), have designed similar models outlining the steps for incorporating portfolios into English skills instruction. Based on the selection and application of these models in the study, we propose the following procedures for using portfolios in teaching and practicing writing skills online at economics universities in Vietnam.

Designing Assessment Rubrics: The instructor designs a competency assessment rubric aligned with the course objectives and writing skill outcomes. Based on these criteria, the instructor identifies the competencies (knowledge, skills, attitudes) to be assessed and the levels of evaluation. The instructor also develops assessment activities and specifies the expected results/products students should achieve.

Introducing e-portfolio-Based Assessment: The instructor introduces the concept of e-portfolio-based assessment for the writing course, explaining its benefits to motivate students and enhance their learning engagement.

Clarifying Requirements and Providing Guidance: The instructor outlines the requirements, information, plans, and objectives to be achieved in the e-portfolios. Sample guidelines can be provided to help students get started. For instance, the instructor demonstrates how to design an e-portfolio, including necessary components such as:

- Writing assessment criteria
- Draft versions
- Peer-reviewed and instructor-reviewed versions
- Revised versions after feedback

- Final submission: The instructor may showcase an exemplary e-portfolio to illustrate expectations.

Sharing e-Portfolio Evaluation Criteria: The instructor explains the criteria for evaluating e-portfolios, including:

- Improvement in writing skills
- The writing process steps
- Interaction and feedback from peers

Introducing Supporting Tools: The instructor introduces various tools to help students build their e-portfolios and collaborates with students to select appropriate design tools.

Providing Support During e-portfolio Creation: The instructor supports and guides students throughout the e-portfolio creation process, recognizing that this may be a new experience for many.

Monitoring, Evaluating, and Providing Feedback: The instructor monitors the e-portfolios, provides evaluations, and offers regular feedback. Students are encouraged to self-assess and provide peer feedback. To facilitate this, the instructor may require students to submit links to their e-portfolios on the course's online learning system (LMS) or create an online forum with links to student portfolios. Within the class environment, students can access a shared class website for peer review, feedback, and corrections.

VI. Conclusion

This study aimed to evaluate the effectiveness of integrating e-portfolios into the teaching and learning of English writing skills for economics students in Vietnam. Using a combination of experimental methods and both quantitative and qualitative data analysis, the research provided robust evidence supporting the positive impact of e-portfolios on students' writing development.

The findings revealed significant improvements in the writing skills of students in the experimental group, as demonstrated by higher post-test scores compared to the control group. Specifically, the independent sample t-test results ($p < .001$) confirmed that the experimental group outperformed the control group, highlighting the effectiveness of the e-portfolio approach. Furthermore, improvements were most notable in Task Fulfillment and Organization, as shown by the paired samples t-test. The average score difference between the pre-test and post-test in the experimental group was more than four times greater than that of the control group, underscoring the significant progress facilitated by e-portfolios.

Students' feedback from the post-experiment questionnaire further reinforced these findings. The majority of students expressed positive experiences using digital platforms such as Padlet and Google Docs for writing practice. They reported increased engagement, better understanding of writing tasks, and improved ability to identify and correct their own mistakes through peer and instructor feedback. Despite some initial hesitation in peer-review activities, students largely acknowledged the benefits of e-portfolios in enhancing their writing skills, fostering autonomy, and promoting active learning.

The study provides compelling evidence that e-portfolios are a valuable tool for improving writing skills in online learning environments. Their integration into language instruction not only enhances students' writing competencies but also fosters greater motivation and learner autonomy. Given these findings, incorporating e-portfolios into the English writing curriculum at Vietnamese educational institutions is strongly recommended to optimize the teaching and learning process.

Despite the promising findings of this study, several limitations should be acknowledged to contextualize the results and guide future research. First, this study was limited to 80 non-English-major students from different economics universities in Vietnam, which may constrain the generalizability of the findings. The homogeneity in participants' academic backgrounds and proficiency levels further limits the broader applicability of the results. Future research should consider larger, more diverse samples across multiple institutions and disciplines to enhance external validity. Second, the intervention period spanned only five weeks, which may not have been sufficient to capture the long-term effects of e-portfolio implementation on writing proficiency. Writing skill development is an incremental process, and extended exposure to e-portfolios may produce different outcomes. Longitudinal studies are recommended to investigate the sustained impact of e-portfolios over an academic semester or year. Third, the exclusive focus on writing skills in this study overlooks the potential impact of e-portfolios on other language competencies such as reading, speaking, and listening. Given the interconnected nature of language skills, future studies should adopt a more holistic approach to examine the influence of e-portfolios on comprehensive language development. Fourth, although most participants adapted well to digital tools such as Padlet and Google Docs, some experienced challenges due to limited technological proficiency or inconsistent internet access. These technological barriers could have influenced student engagement and performance. Future research should explore the role of digital literacy in e-portfolio efficacy and propose strategies to mitigate these barriers. Last, while post-intervention surveys provided quantitative insights into student experiences, they lacked the depth that qualitative methods could offer. Incorporating interviews, focus groups, or reflective journals in future studies would yield a more nuanced understanding of student attitudes, challenges, and engagement with e-portfolios.

Addressing these limitations and exploring the recommended avenues for future research will contribute to a more comprehensive understanding of the role of e-portfolios in language education, ultimately enhancing both teaching practices and student learning outcomes.

APPENDIX

Pre-test

Task: You should spend about 20 minutes on this task.

You live in Ho Chi Minh City. You moved to Manchester to study English three months ago. You have just received an email from a friend of yours=, Sara from London. Read part of her email below.

….
What's Manchester like? I bet the weather's not too good!
Have you still got that part-time job in the fast-food restaurant?
It must be a good way of speaking to new people and making friends.
What about the family you're staying with? Do you go out much in the evening? I hope the English classes are going well.
……..
Sara

Write a reply to Sara. In your email, you have to describe Manchester and the weather there, tell her about your part-time job, the family you are staying with, and your activities in the evening, and finally, you have to write about your English classes there.
You should write at least 120 words.

Post-test

Task: You should spend about 20 minutes on this task.

You live in Ho Chi Minh City. You just took a trip to Ha Long Bay with an English friend named Daisy. You received an email from her after she returned to London. Read part of her email below.

……
I hope you like the photos we took in Ha Long Bay. Did you get home all right?
I'm back at work now, but it's a bit difficult to start again. I wish we were still on holiday.
Why don't we plan another trip this spring if you've got time and money? Any suggestions where we could go?
……..
Daisy

Write a reply to Daisy. In your email, you have to tell her that you really like the photos and the time you got together, describe a problem you had at the airport to her, and suggest the time and place for the next trip.
You should write at least 120 words.

REFERENCES

[1] Aydin, S. (2014). EFL writers' attitudes and perceptions toward F-Portfolio use. *TechTrends*, *58*, 59-77. https://doi.org/10.1007/s11528-014-0737-6

[2] Barrot, J. S. (2016). Using Facebook-based e-portfolio in ESL writing classrooms: impact and challenges. *Language, Culture and Curriculum*, 29(3), 286-301. https://doi.org/10.1080/07908318.2016.1143481

[3] Beck, E., Crow, A., McKee, H. A., Reilly, C. A., deWinter, J., Vie, S., Gonzales, L., & DeVoss, D. N. (2016). Writing in an age of surveillance, privacy, and net neutrality. *Computers and Composition*, *39*, 1–2. https://doi.org/10.1016/j.compcom.2015.12.005

[4] Bisovsky, G., & Schaffert, S. (2009). Learning and Teaching With E-Portfolios: Experiences in and Challenges for Adult Education. *International Journal of Emerging Technologies in Learning (iJET)*, *4*(1), pp. 13–15. https://doi.org/10.3991/ijet.v4i1.822

[5] Clemmer, R., Spencer, J., Lackeyram, D., Thompson, J., Gharabaghi, B., VanderSteen, J., & Zytner, R. G. (2015). Use of eportfolio tool for reflection in engineering design. *Proceedings of the Canadian Engineering Education Association (CEEA*). https://doi.org/10.24908/pceea.v0i0.5839

[6] Farrell, O. (2020). From portfolio to e-portfolio: The evolution of portfolio in higher education. *Journal of Interactive Media in Education*, *1*(19), 1–14. https://doi.org/10.5334/jime.574

[7] Fukunaga, S. (2018). English writing e-portfolio for university STEM majors. *Procedia Computer Science*, *126*, 1571-1577. https://doi.org/10.1016/j.procs.2018.08.130

[8] Huang, H. T. D., & Hung, S. T. A. (2010). Effects of electronic portfolios on EFL oral performance. *Asian EFL Journal*, *12*(2), 192-212.

[9] Kabilan, M. K. (2016). Using Facebook as an e-portfolio in enhancing preservice teachers' professional development. *Australasian Journal of Educational Technology*, *32*(1), 19–31. https://doi.org/10.14742/ajet.2478

[10] McGregor, M. (2020). Metalinguistic reflection and computer-mediated communication: An interventionist approach to language study abroad. *Canadian Journal of Applied Linguistics*, *23*(1), 192-210. doi: 10.37213/cjal.2020.28958.

[11] Mummalaneni, V. (2014). Reflective essay and e-portfolio to promote and assess student learning in a capstone marketing course. *Marketing Education Review*, *24*(1), 43-46. https://doi.org/10.2753/MER1052-8008240107

[12] Nguyen, L. T. T., & Pramoolsook, I. (2014). Rhetorical structure of introduction chapters written by novice Vietnamese TESOL postgraduates. *3L: Language, Linguistics, Literature*, *20*(1), 61–74. https://doi.org/10.17576/3L-2014-2001-05

[13] Shin, S. Y. (2013). Developing a framework for using E-portfolios as a research and assessment tool. *ReCALL*, *25*(3), 359-372. https://doi.org/10.1017/S0958344013000189

[14] Ngui, W., Pang, V., Hiew, W., & Tan, C. K. (2019). Designing an e-portfolio framework for academic writing of second language learners. *International Journal of Language Education and Applied Linguistics*, *9*(1), 1–13. https://doi.org/10.15282/ijleal.v9.2065

[15] Van, P. V., Lam, H. T., Nguyen, L. T., & Le, T. P. (2021). Improving the effectiveness of students' progress assessment in a blended learning environment at Lac Hong University. *Journal of Technical Education Science*, *16*(1), 43-49. https://doi.org/10.54644/jte.62.2021.69

[16] Van Wyk, M. M. (2017). An e-portfolio as empowering tool to enhance students' self-directed learning in a teacher education course: A case of a South African university. *South African Journal of Higher Education*, *31*(3), 274-291. http://dx.doi.org/10.208535/31-3-834.

[17] White, A. (2019). E-portfolios: Integrating learning, creating connections and authentic assessments. In A. K. Sharma & P. Meher (Eds.), *Blended Learning Designs in STEM Higher Education: Putting Learning First* (pp. 167–188). Springer Singapore. https://doi.org/10.1007/978-981-13-6982-7_10

[18] Wicks, D., & Lumpe, A. (2015). Electronic portfolios as pedagogy: Using e-portfolios for authentic assessment of teacher knowledge and skills in the US. In D. J. M. Bailer & J. L. Green (Eds.), *International Teacher Education: Promising Pedagogies (Part C)* (pp. 219–232). Emerald Group Publishing. https://doi.org/10.1108/S1479-368720150000022011

Hoang Thu Ba is currently a Vice Director, Center for Research and Training Professional Skills. She has been a lecturer at Theoretical Linguistics Department, Faculty of English, Thuongmai University for 17 years. Since joining Thuongmai University in 2007, Thu Ba has worked as an English teacher and has been involved in studies related to ELT, Applied Linguistics, and Pragmatics. Ba has attended national and international conferences about ELT and linguistics. In 2024, Ba obtained a Ph.D. degree in the contrastive linguistics and sociolinguistics field in Vietnam. She has published a number of articles on pragmatics issues, motivation in learning and teaching business English. She can be reached at hoangthuba@tmu.edu.vn. ORCID iD: https://orcid.org/0009-0004-0787-2976