UTS UNIVERSITY OF TECHNOLOGY SYDNEY

Flipping the Classroom: The Effects of Flipped Learning on an EFL Academic Writing Course in a Vietnamese University

by Thi Ha Do

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under the supervision of

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Certificate of Original Authorship

I, Thi Ha Do, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in the Faculty of Arts and Social Sciences at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

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Abstract

Due to recent developments in educational technology, university lectures can be digitalised for home study, thus freeing more class time for higher-order activities such as problem solving, discussions, and projects. This is the basis for flipped classroom (FC) instruction, a blended mode of online and face-to-face learning that has been shown to facilitate students' engagement and performance across various disciplines and national contexts. Despite many positive findings about this approach compared to traditional teaching, little if any research has been done to examine students' attitudes and achievements when they switched from flipped to non-flipped instruction. This study examined the effects of flipped instruction on the EFL academic writing of 32 English major students and two of their teachers at a Vietnamese university. During the 10 weeks of their writing course, two FC models – all-flipped, and flipped-and-traditional – were applied in two classes to investigate any significant changes in the teachers' and students' perceptions, and in student learning outcomes. Triangulation was employed with pre- and post-questionnaires, class observations, teacher and student interviews, and writing pre- and post-tests. This study yielded promising results in terms of students' positive attitudes to the flipped writing instruction and improved learning outcomes, particularly for students of lower ability. This investigation of the relatively under-researched area of flipped studies in Vietnam should help university teachers elsewhere to make better informed choices about whether and how to apply the method in their own practices.

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List of Acronyms & Abbreviations

ASEAN	Association of Southeast Asian Nations
AW	Academic Writing
AWL	Academic Word List
BL	Blended Learning
CEFR	Common European Framework of Reference for Languages
CLT	Communicative Language Teaching
EAW	English Academic Writing
EFL	English as a Foreign Language
FC	Flipped Classroom
HERA	Higher Education Reform Agenda
ICT	Information and Communication Technology
IELTS	International English Language Testing System
L1	First Language
L2	Second Language
LMS	Learning Management System
MKO	More Knowledgeable Other
MOET	Ministry of Education and Training
MOOCs	Massive Open Online Courses
NFLP	National Foreign Language Project
RQ	Research Question
SDT	Self-Determination Theory
TDOP	Teaching Dimensions Observation Protocol
TOEFL	Test of English as a Foreign Language
TPACK	Technological Pedagogical Content Knowledge
ZPD	Zone of Proximal Development

CHAPTER 1

Introduction

Recent decades have witnessed the accelerating development of technologies that have transformed not only classrooms, but also the roles of teachers and students (Alexander et al., 2019). Accessibility to learning resources and opportunities for interaction and collaboration are now expanding beyond the confined classroom context. This thesis documents an investigation into the implementation of the flipped classroom (FC), a blended mode of online and face-to-face learning, that took place in an English as a Foreign Language (EFL) Academic Writing course in a Vietnamese university in 2019. Immediately following this study came the COVID-19 pandemic, which necessitated many institutions switching to online or blended modes from the beginning of 2020, thus bringing more attention to this topic.

Education should incorporate the best of both worlds: online platforms for the provision of learning resources, and physical classrooms for promoting higher order thinking activities. According to a US Department of Education (2010) report, a blended approach offers greater educational value than purely online engagement, with one of its major benefits a sense of community among learners (Garrison & Kanuka, 2004). Further research on how to blend these two delivery options has been of primary concern for educators and institutions. This chapter first describes the contexts of higher education and English language teaching in Vietnam, with a focus on the conflicts between educational policy and reality in that country. Next it discusses the importance of technological integration in English education reforms. This is followed by the problem statement, research objectives, and significance of this study.

1.1 Setting the Context

The interaction of two major contexts – Vietnamese higher education and English language teaching – emphasises the need to integrate available technologies to improve the quality of English education in the new era of globalisation. These two contexts will be described in the following sub-sections.

1.1.1 Vietnam and the Vietnamese Higher Education Context

Along with history, education has to change to meet the shifting needs of the time. Historically, Vietnam has been influenced by successive external forces. It was ruled by the Chinese for more than a thousand years (111 BC to 938 AD), colonised by the French for nearly a century (1858 to 1954), and divided into the North and the South by the American war (1954 to 1975). That war ended on 30th April, 1975, and for more than 40 years, the Vietnamese government's drive towards an open economy has propelled the nation from being one of the world's poorest to becoming a middle-income country (World Bank, 2021).

A World Trade Organization member since 2007, the key to Vietnam's economic growth during the age of globalisation has been to target its young population (70% of its people are under 35 years old) and its higher education system to improve the international competitiveness of its professional labour force. Since the early 1990s, the Vietnamese higher education landscape has changed significantly, with a remarkable increase in the number of universities from 120 to 237, of which 172 are public and 65 are private (Ministry of Education and Training [MOET], 2021). Vietnam's gross enrolment ratio in the tertiary level has been rising at an average annual rate of almost 15% (Mruthyunjayappa, 2021).

Due to Chinese domination for over a thousand years, teaching and learning in Vietnam reflects the influence of Chinese Confucianism in the form of knowledge transmission, rote learning, examination-oriented curricula, and hierarchical learning environments (K. D. Nguyen & McInnis, 2002; H. L. Pham & Fry, 2004; L. T. Tran & Marginson, 2018; Welch, 2010). According to Kember (1996), Confucianism emphasises "obedience, proper conduct, moral training, and the acceptance of social obligations" and thus implies "a lack of independence, assertiveness, and creativity" (p. 87). In countries with high power distance such as Vietnam, people are encouraged to respect a hierarchical relationship, especially between teachers and students (V. C. Le, 2004). Vietnamese students tend to see teachers as the ultimate source of knowledge and to not question or challenge them (Chan, 1999; Jin & Cortazzi, 1998; V. C. Le, 2004). Asking questions, expressing ideas, or challenging teachers are often considered disruptive to teaching (Littlewood, 1999) and disrespectful to teachers (Nguyen-Phuong-Mai et al., 2012). Vietnamese students have therefore been characterised as having a passive learning style, not thinking independently, and unwilling to express their own ideas (T. H. T. Pham, 2008). In higher education particularly, this way of teaching and learning does not equip students with the independent learning strategies and problem-solving capacities required in the workplace (N. Q. H. Luu, 2006).

To ensure a comprehensive transformation of Vietnamese higher education by 2020, the government launched the Higher Education Reform Agenda (HERA) in 2005 with the aim of modernising the system and improving teaching pedagogy (Vietnamese Government, 2005). Recent research on Vietnamese higher education has noted a gradual shift from memorisation, repetition, and passive learning to

active teaching and learning approaches that are more student centred, such as pair and group work and learning approaches that are inquiry based, task based, and project based (Harman & Le, 2010; Mai & Hall, 2017; L. T. Tran et al., 2014).

To enhance human resources integration, Vietnamese curricula have recently been modified to be more aligned with ASEAN Qualifications Framework and International Qualification Framework (T. V. Pham et al., 2019). Decision No. 1982/QD-TTg, issued in 2016 on Approval for the Vietnamese Qualifications Framework, states that higher educational institutions should "review and adjust the structure, contents and methods for running training programs suitable for the requirements of the employers and undertake to keep the training program in accordance with the outcome standards" (Article 2). This has resulted in an increasing tendency in Vietnamese universities to reduce the 4 to 6 years (150 credits) required for a tertiary degree to 3 to 5 years (132 credits). Although it will now be more affordable for students to earn a degree and enter the workforce sooner, they will have to make greater efforts to meet the degree requirements within shorter time frames. While the job market requires university graduates to have a variety of skills, one of HERA's main concerns is their English language proficiency for better integration into the global community.

1.1.2 English Language Teaching and Learning in Vietnam

The emergence of English education in Vietnam is tied up with the country's 1986 open-door policy, known as Doi Moi, which has aimed to create a socialist-oriented market economy for a successful integration into the global market. The result has been a surge in demand for English proficiency (Do, 2006; Huan, 2014). English has become the key foreign language taught in the Vietnamese education system, and it is one of the four tests in the National High School Graduation Examination and a compulsory subject for both undergraduate and graduate levels (H. B. Nguyen & Le, 2011; D. T. Tran et al., 2016).

In the early 1990s, English language teaching practices in Vietnam reflected the dominance of the grammar-translation method (Denham, 1992; Kam, 2006). Teachers focused on supporting students to memorise grammar and vocabulary from the chosen textbooks while neglecting communication skills such as speaking and writing (Tomlinson & Dat, 2004). To move away from this writing-based pedagogy to a more practical orientation, in 2006 the MOET instituted curriculum renewal using a communicative language teaching (CLT) approach. Teachers are now expected to play the role of facilitators to support students' active learning and "engage learners in meaningful and authentic language use" (Richards & Rogers, 2001, p. 72).

However, English teaching in high school still focused on linguistic performance to cope with grammar-based examinations, in which multiple-choice questions assessed grammatical and lexical accuracy (V. C. Le & Barnard, 2009; T. H. Nguyen et al., 2014; T. T. Tran, 2013). Students often did not

have enough opportunities to practise English communicatively in a large language class or in their non-English speaking communities outside the classroom (V. C. Le, 2001; Ton & Pham, 2010). It was a stark reality that although Vietnamese students might train in English for 900 periods in high school and 200 periods at university, they could still perform poorly in English speaking and writing at work (N. H. Nguyen, 2013; L. T. Tran & Marginson, 2018).

In reaction to the high demand for an English-proficient workforce, the Vietnamese government issued Decision No. 1400/QD-TTg in the plan for Teaching and Learning Foreign Languages in the National Formal Educational System for the Period of 2008–2020. This National Foreign Language Project (NFLP 2020), with a substantial budget of VND 9,378 billion (approximately AUD 600 million), set out to reform foreign language teaching and learning, especially English, across the national education system with the general goal:

> By the year 2020 most Vietnamese youth whoever graduate from vocational schools, colleges and universities gain the capacity to use a foreign language independently. This will enable them to be more confident in communication, further their chance to study and work in an integrated and multi-cultural environment with variety of languages. This goal also makes language as an advantage for Vietnamese people, serving the cause of industrialisation and modernisation for the country. (Vietnamese Government, 2008, p. 1)

The required benchmarks for Vietnamese students and teachers at all levels were specified by a 6-level foreign language competency framework based on the Common European Framework of Reference for Languages (CEFR) (Vietnamese Government, 2008), as shown in Table 1.1:

Table 1.1.
Required English Proficiency Benchmarks for Vietnamese Students and Teachers

CEFR	***CEFR-VN***	***Students***	***Teachers***	***General Description***
A1	**1**	Primary		Can communicate in basic English with help from the listener
A2	**2**	Secondary		Can communicate in English within a limited range of contexts
B1	**3**	High school Tertiary (English non-majors)	Primary	Can communicate essential points and ideas in familiar contexts
B2	**4**		Secondary	Can use English effectively, with some fluency, in a range of contexts

CEFR	***CEFR-VN***	***Students***	***Teachers***	***General Description***
C1	**5**	Tertiary (English majors)	High school Tertiary	Able to use English fluently and flexibly in a wide range of contexts
C2	**6**			Highly proficient – can use English very fluently, precisely and sensitively in most contexts

Adapted from Vietnamese Government (2008)

As can be seen from Table 1.1, university graduates not majoring in English are required to reach the B1 level of English proficiency (the third of six levels under the CEFR-VN), while English majors and university teachers of English are expected to have reached at least the C1 level (Level 5 of the CEFR-VN).

The quality of English education at all levels in Vietnam has been unable to meet the country's demands of socio-economic development (Vu & Burn, 2014). The outcomes of NFLP 2020 have fallen behind its goals, as reflected in the students' unsatisfactory scores on the National High School Graduation Examination (V. C. Le, 2020) and the low English proficiency of graduate students (L. T. Tran & Marginson, 2018). The results of a nationwide Vietnamese EFL teachers' language proficiency assessment revealed that two-thirds of the teachers could not meet the expected fluency criteria (V. C. Le & Renandya, 2017).

According to the 2021 English Proficiency Index compiled by the global education firm Education First (EF), the Vietnamese people's English proficiency has dropped for the second consecutive year, being listed in the low proficiency category. Although the NFLP 2020 failed to fulfil its initial targets, the government has approved an extension of the project until 2025 via Decision No. 2080/QD-TTg. With a focus on online learning, for the next phase of the project three key issues have been identified as impeding language proficiency progression:

(**1**) Lack of qualified foreign language learning resources with free and open access;
(**2**) Lack of advanced technologies to support learners and teachers to learn and teach foreign languages effectively; and
(**3**) Lack of a supportive community for teaching and learning foreign languages (Edmett et al., 2017, p. 7).

To achieve the CEFR levels for school leavers, online learning is seen as a potential solution that allows students to access more input and opportunities for English language practice outside the classroom. Vietnamese educational reforms have thus recognised the value of applying technologies in English language education in the new era of digital communications.

1.1.3 Information and Communication Technology in English Language Education in Vietnam

Information and communication technology (ICT) assists students in active independent learning and enables access to further support, thus fundamentally changing the role of teachers (Çakici, 2016; Eaton, 2010). Communication tools such as discussion boards, chat rooms, and blogs facilitate more interaction and collaboration beyond the classroom walls (Pop & Slev, 2012).

Significant funding for teaching materials, facilities, and teacher training across all levels of education has improved the quality of EFL teaching in Vietnam. Resolution No. 29 NQ-TW in 2013 regards ICT as an essential priority in educational reforms. Together with pedagogical innovation, MOET has invested in the school systems' ICT infrastructure, with Directive 55/2008/CT-BGDĐT encouraging teachers to incorporate new technologies into their teaching. The NFLP has given top priority to developing the competence standard of ICT application for Vietnamese foreign language teachers.

Due to inadequate support and training, Vietnamese EFL teachers are challenged to adapt to new teaching materials, student-centred approaches, and the fostering of student autonomy (Hu & McGrath, 2011). Students today, as digital natives, have high demands and expectations that technologies will personalise their language learning experiences (H. T. Dang & Nguyen, 2014; Prensky, 2001). Higher education teaching thus requires ICT adoption to match individual student needs in terms of "mode, pace, place and time" (Sarkar, 2012, p. 37). Because of the rapid changes, there is pressure on teachers to become familiar with technological resources and how to use them to teach the subject content (Kershaw, 2016).

1.2 Statement of the Problems

The Vietnamese government has been investing in English proficiency because it considers English writing an important skill for academic and professional success. It has been shown that most non-native learners are less competent in this skill than in the receptive skills of listening and reading (Berman & Cheng, 2010). Traditional writing instruction in Vietnam has often focused on grammatical and lexical patterns, as well as essay models, which are merely geared towards success in tests (T. T. Luu, 2011; L. T. Tran, 2007). In the context of Vietnamese higher education, lecture-based teaching remains the prevailing instructional approach (V. D. Tran, 2014; World Bank, 2020). T. C. Nguyen (2010) expressed concern that as traditional class activities often focus on textbooks and lecture talks, students tend to be disengaged during them. Current English language teaching in Vietnam still falls short of providing students of different levels with clear guidelines for effective writing instruction and with motivation to keep practising a variety of writing styles.

In early 2019, when this study was conducted, the132-credit curriculum was being initially applied in some universities, replacing the 150-credit curriculum. The reduction of credits has posed a

challenge for English language teaching, given that instructional campus hours of the old curriculum were already considered insufficient for students to attain high proficiency (Y. P. Hoang, 2017). To ensure continuation of the content previously covered in face-to-face instruction, as well as to enhance opportunities for English language practice, the flipped classroom (FC) has been introduced to provide more flexibility in both time and space. The FC is a reversal of traditional teaching: by using online lectures for students' study at convenient times and places, class sessions are saved for higher order activities such as problem solving, discussions, and projects (Bergmann & Sams, 2012; Davies et al., 2013; Fulton, 2012).

Although a wide array of studies on flipped EFL classrooms have been conducted (e.g., Hsieh et al., 2017; G. Lee & Wallace, 2018; Soliman, 2016; Zou & Xie, 2019), including in Vietnam (H. A. V. Nguyen et al., 2018; Thai et al., 2017), there has been little in-depth research on how FCs can influence EFL academic writing in a Vietnamese higher education context. Most previous research has relied upon the students' general achievements when using FCs compared to traditional methods (Jehma, 2016; Leis et al., 2015). Few studies have examined changes in teachers' and students' attitudes, let alone text analysis and students' writing achievements. The present study seeks to fill this research gap. In two case studies involving university classes, it investigated the effects of different FC interventions on EFL teachers' and students' attitudes and students' performance in academic writing. The results of the study also identify some of the factors that have affected the implementation of FCs in English education in Vietnam.

1.3 Research Objectives

The goal of this research is to explore the effects of FC approaches on EFL teachers' and students' attitudes and on students' writing achievements. The researcher embarked on two case studies in which the FC model was applied in different proportions so that the teachers' and students' reactions to the changes could be carefully examined. The study has sought to answer the overarching question:

> ***What are the effects of flipped learning on an EFL Academic Writing course in a Vietnamese higher education context?***

To address this overarching research question, the teachers' and students' experiences of flipped writing instruction were investigated throughout two phases of interventions.

The study also has three research sub-questions:

(**1**) How do participating Vietnamese EFL students experience the flipped classroom?
(**2**) What are the effects of the flipped classroom on these students' achievements?
(**3**) What are the teachers' perceptions of implementing a flipped classroom approach?

1.4 Significance of the Study

This study is significant because it is the first to provide evidence-based findings about the effects of FC approaches on EFL academic writing in Vietnam. In addition, it captures the voices of students and teachers, the two main agents in teaching and learning. By shedding light on both the possibilities and limitations of FCs, the study's holistic view will provide useful guidance for researchers and practitioners not only in Vietnam but also in other settings. Practitioners particularly will be able to make informed choices about whether to apply the method in their own teaching. Given the key roles of EFL and ICT in the current pedagogical reforms in Vietnam, the results may also assist the NFLP in aspects of material design, educational objectives, and provision of learning opportunities and thus better accommodate EFL Vietnamese learners, especially at tertiary levels.

1.5 Structure of the Thesis

The thesis is organised into seven chapters. This chapter has positioned the study by reviewing the context of Vietnamese higher education and English language teaching since Doi Moi in 1986 and the changes in EFL educational policy due to technology integration. It has also discussed the significance of the study and established the research questions.

Chapter 2 reviews the available literature on EFL academic writing and FC approaches, with social constructivism as the main theoretical framework. The chapter then highlights gaps in the literature.

Chapter 3 describes the research setting and methodology used in the study, justifying the chosen research approaches. It then explains the sampling strategies selected, and the processes used for collecting and analysing the quantitative and qualitative data. The chapter concludes with a discussion of validity, reliability, and ethical considerations.

Chapters 4 and 5 delineate the findings from the questionnaires, writing tests, and interviews. Each chapter investigates one class/case, including the student groupings, to yield insights into the impacts of factors such as the students' academic profiles and online engagement on their attitudes, perceptions, and achievements. The final section of each chapter addresses the teacher's perspectives on using FC model in EFL academic writing.

Chapter 6 discusses the key findings of this research into the effects of flipped learning on the participating students' and teachers' experiences and attitudes, as well as the students' achievements. Comparisons are made between the two classes/cases, with contextualised interpretations of the results. The significance of the FC approach for students and teachers is discussed in relation to the existing literature.

Chapter 7 summarises the study's key findings in relation to the research aims, and discusses the implications for theory and practice. The final part of this chapter reviews the limitations of the study and recommends future research into the topic.

CHAPTER 2

Literature Review

2.1 Introduction to the Chapter

This thesis is concerned with the influence that a flipped classroom (FC) approach might have on English as a foreign language (EFL) academic writing in a Vietnamese higher education context. To consider how FCs and EFL intersect, the study took a constructivist approach to ascertain how an FC enhanced both pedagogical input and opportunities for students' interaction and feedback. This literature review outlines research on EFL academic writing that has not only promoted a supportive learning environment for the skill development of students at different levels, but also examined the benefits and challenges of FC implementation in EFL settings. In line with the study's research questions, the chapter also discusses the research gaps on EFL flipped writing classrooms in a Vietnamese context.

2.2 EFL Academic Writing

Researchers have identified that language learning requires extensive exposure to, interactions with, and authentic use of the target language (Gass & Mackey, 2006; Swain, 2000). The problem for EFL is that everyday or authentic activities are typically carried out in the local language, putting extra pressure on language classrooms to use the target foreign language as much as possible (Parker et al., 1995). Krashen (1982) suggested a comprehensible input hypothesis in which language acquisition takes place if students are supplied with extra-linguistic cues to link the known to the new information. However, students may receive insufficient "input, output, and interaction, particularly given the time constraints of a language class" (Spino & Trego, 2015, p. 3). One solution is to create pre-class input materials that can facilitate language learners to actively participate productively in class activities (Pica et al., 1996).

Writing in a second language (L2) is a complex skill that requires simultaneous control over a number of subskills, some of which can be challenging even for native speakers (Alsamadani, 2010; H. D. Brown, 2004; Nunan, 1996, 1999; Richards & Renandya, 2002; Rivers, 1981). Subskills that may need to be learned include organising ideas and choosing the vocabularies, grammatical patterns, and sentence

structures needed to create a coherent text with high accuracy and an appropriate style (Hedge, 2005; Myles, 2002). For L2 learners, added challenges lie in the differences in rhetorical conventions of the target language texts, such as the structure, style, and organisation (Nunan, 1999), as well as the acquisition of syntactic and lexical competence – "a process that could take a lifetime" (Silva, 1993, p. 658). Students have been found to struggle in their L2 writing because of the need to focus on language rather than content (Weigle, 2005). When L2 learners focus their attention on the micro features of their writing (e.g., grammatical accuracy and lexical sophistication), they may neglect issues on the macro level (e.g., coherence and cohesion) (Silva, 1993).

In this study, academic writing is defined as the kind of writing required for university students that is concerned with a clear organisation, logical arguments, and high levels of formality (Oshima & Hogue, 2007). Academic writing has been found to be a highly demanding task for EFL students whose English writing activities are mostly confined to in-class experiences (V. C. Le & Nguyen, 2010; Teng, 2020). While English-language academic texts tend to be explicit about structure and purposes (Hyland, 2008b), Vietnamese styles of organising academic writing do not always correlate with those academic conventions (T. T. M. Nguyen & Le, 2012). Vietnamese students find writing difficult in terms of vocabulary, grammar, and ideas, and tend not to feel confident about writing in English (D. K. Nguyen et al., 2011). A challenge for language teachers is how to attend to students with diverse aptitude levels and learning needs within time constraints (Skehan, 2002). Although in-class lessons can be modified to accommodate a range of students, it can be difficult to customise the instruction of individual students (Muldrow, 2013).

2.2.1 Approaches to Teaching EFL Academic Writing

Approaches to teaching academic writing in the EFL classroom have used various starting points and outcomes to enhance student performance. Three main approaches have been identified by those working in the field (e.g., H. D. Brown, 2001; Harmer, 2007; Silva, 1993): the product approach, the process approach, and the genre-based approach. In addition, a process-genre approach has been proposed to develop students' awareness of different text types (Badger & White, 2000; Hyland, 2003b). The process-genre approach was used in the current study. The following sub-sections briefly describe these four approaches.

2.2.1.1 The Product Approach. The product approach is concerned with the writing that students produce and their knowledge of language structure. Students are expected to produce the correct textual form that adheres to the model provided by their teacher. L2 writing assessment in standardised testing has mainly focused on the writing product (e.g., linguistic skills such as academic vocabulary and formal features of grammar) rather than on the writing process (Hinkel, 2002; Vaughan, 1991). There are four stages in the product approach: (**1**) familiarisation, (**2**) controlled writing, (**3**) guided writing, and (**4**) free writing. The familiarisation stage brings students' awareness to certain

features of a particular text. In the controlled and guided writing stages, students practise the skills with support until they are ready for free writing. Teachers play a critical role in modelling language, guiding exercises, and assessing the finished writing product. However, the product approach has been criticised for undervaluing learners' creativity due to its over-emphasis on fixed patterns (Prodromou, 1995).

Teachers of EFL writing in Vietnam have traditionally used the product approach, with grammar and sentence structure the important components (H. H. Pham, 2000; L. T. Tran, 2007). To reduce the chance of students making errors, writing activities are often restricted to controlled writing exercises through the reconstruction of model sentence structures and guided composition of sentences and paragraphs. When assessing writing, EFL teachers often focus on students' reproduction of linguistic rules or structures rather than communicative discourse (V. C. Le & Barnard, 2009). As a result, students tend not to apply their knowledge of language features for communicative purposes. In a study by Phuong (2017), just over half of the 848 participating students from 15 universities in the Mekong Delta of Vietnam reported they could write basic English phrases and sentences linked with simple conjunctions. Only a third were confident about writing a simple personal letter in English.

2.2.1.2 The Process Approach. The process approach focusses less on what sort of writing is produced and more on how it is produced, the process itself. Students move through writing stages such as planning, drafting, revising or redrafting, and editing (Harmer, 2007). The teacher's role is to facilitate the exercise of writing skills, with teacher or peer feedback postponed until the revising stage. Thus, linguistic conventions are not explicitly taught, but experienced. A criticism levelled at the process approach is that the lack of explicit teaching can cause difficulties for L2 learners (Cope & Kalantzis, 1993; Hyland, 2008a). Opponents of this approach argue that merely providing opportunities to write can result in students having little systemic understanding of language patterns in specific contexts. In addition, it cannot ensure that students, especially those at low levels of proficiency, can acquire sufficient linguistic skills against which they are typically evaluated in the final writing product (Badger & White, 2000; Graham & Sandmel, 2011).

2.2.1.3 The Genre-Based Approach. The genre-based approach looks beyond composing processes and linguistic forms so that students can realise the purpose of a written text (e.g., an academic essay or a business report) for a presumed audience (Hyland, 2002). In systemic functional linguistics, developed by Michael Halliday, genres are defined as "staged, goal-oriented social processes" (Martin, 1992, p. 505) in which participants attain their purpose by following "a conventional, step-wise structure" (Hyland, 2002, p. 17). The pedagogy associated with this approach is the explicit instruction of the linguistic conventions (e.g., language features and schematic structure) of particular text types (Tuffs, 1993). Students learn to use appropriate vocabulary and grammar to express content, engage readers, and organise sentences in the context of a particular purpose such as argumentation, discussion, explanation, and description. The genre-based teaching–learning cycle comprises three phases:

(**1**) *Modelling*: The teacher and students discuss the text genre using models of the target text and deconstruct it to identify the features. Students then learn the vocabulary and grammatical or structural patterns used in a certain genre.
(**2**) *Joint construction*: Students are guided to reconstruct a particular genre. The teacher makes sure the students understand the features of the genre, such as its communicative purpose, the structural elements of the text, its grammatical patterns, and relevant vocabulary usage.
(**3**) *Independent construction*: Students write a given genre type independently and discuss feedback with the teacher and peers after finishing it (Hyland, 2003a).

However, similarly to the product approach, the genre-based approach has been criticised for its tendency to focus on the application of rules and to restrict individual creativity (Badger & White, 2000; Hyland, 2003a).

2.2.1.4 The Process-Genre Approach. As a way of addressing the perceived needs of students within the process of writing, but with explicit instruction, the process-genre approach has been gaining recognition. It considers writing as a series of stages leading from a particular situation to a text, with grammatical and lexical items to be taught in meaningful, interactive situations. Teachers assist students in identifying the aspects of social context of the writing such as the "mode" (spoken or written text), the "field" (particular topic), and the "tenor" (intended reader). Teaching about writing in this way aims to build:

(**1**) knowledge about language (by providing input, as in product and genre-based approaches);
(**2**) knowledge of the context and writing purpose (as in genre-based approaches); and
(**3**) skills in using language (by deploying learners' potentials, as in process approaches) (Badger & White, 2000).

The pedagogy adds to the genre-based approaches by focusing on the process of writing so that students undertake a recursive process of six steps:

(**1**) *Preparation*: The teacher prepares students to write by defining a situation that requires a written text of a particular genre.
(**2**) *Modelling*: The teacher introduces a model and discusses the structure and organisation needed to achieve its purpose.
(**3**) *Planning*: Students participate in meaningful activities including brainstorming, discussing, and reading associated materials.
(**4**) *Joint constructing*: This step fosters collaborative writing and prepares students for individual work.
(**5**) *Independent constructing*: Students compose their own texts in class or at home.
(**6**) *Revising*: Students may check, discuss, and evaluate their work with peers, as the teacher again

guides and provides feedback (Yan, 2005).

Some studies of the process-genre approach in the development of writing skills in EFL contexts have revealed improved clarity of ideas, essay structuring, and other features of specific genres (Arteaga-Lara, 2017; Babalola, 2012; X. Xu & Li, 2018). Agesta and Cahyono (2017) found the process-genre approach had positive effects on Indonesian EFL writing achievements in terms of organisation, vocabulary, grammar, and mechanics (such as spelling, punctuation, capitalisation). Huang and Zhang (2020) found that an intervention group given process-genre instruction outperformed a comparison group (given a product approach), as shown in their overall score and in scores on five components (content, organisation, vocabulary, language, and mechanics), particularly content and organisation. S.-Y. Kim and Paek (2020), when examining the role of explicit instruction in a process-genre approach, identified students' writing improvements, but the relative effects varied according to their L2 writing proficiency; the more competent group showed improvement in the four areas of measurement other than "grammar", while the less competent group made progress in "organisation" and "purpose". Such findings argue for consideration of L2 proficiency when applying the process-genre approach.

Studies into Vietnamese contexts have found significant improvements in students' writing and positive attitudes towards the process-genre approach (e.g., T. T. T. Le & Le, 2018). Through interviews with experienced and qualified lecturers, Tuyen et al. (2016) demonstrated that the process-genre approach could assist students in writing research papers. Similarly, D. K. Nguyen et al. (2011) reported significant progress in students' writing ability once they were given additional input and opportunities for multiple drafts and feedback. The connection of process-genre pedagogies can be translated into an effective instructional approach to the teaching of EFL academic writing; however, the instructional hours at university seem to be insufficient for students to achieve the necessary outcomes (Y. P. Hoang, 2017).

2.2.2 Teacher Feedback and Peer Feedback

Feedback has been found to play a central role in developing L2 writing proficiency (Hyland & Hyland, 2006). Feedback can be defined as input from the reader to the writer (Keh, 1990). According to Furnborough and Truman (2009), feedback entails the existence of gaps between the learner's production and the expected outcomes, as well as the efforts needed to bridge these gaps.

There have been two opposing views about the impact of corrective feedback on learners' writing performances. Truscott (1996) argued that grammar error feedback is not only ineffective but also harmful to L2 students' writing development, and hence should be abandoned. In her response to Truscott (1996), Ferris (1999) demonstrated the capacity for grammar correction to improve L2 writers' accuracy. According to Mack (2009), effective feedback assesses students' skills and provides opportunities for them to improve their task performances.

Teacher feedback has the potential to foster student learning because "feedback has one of the strongest effect sizes of any instructional practice" (Goodwin & Miller, 2013, p. 70). In Ferris's (2006) study, students' errors in their third drafts decreased about 80% in all the error categories marked by the teacher in their second drafts. It has been suggested that teacher feedback covers all aspects of students' written texts, including issues of content, organisation, style, grammar, and mechanics (A. Cohen & Cavalcanti, 1990). In practice, teachers have been reported to focus more on local issues (i.e., spelling, grammar, and punctuation), despite their belief in the importance of the global dimensions of content and ideas (Mao & Crosthwaite, 2019; Montgomery & Baker, 2007).

Teacher written feedback is divided into direct and indirect feedback (Hyland & Hyland, 2006). Direct feedback relates to the correction of linguistic forms when the teacher notices the errors produced by students; hence, it might be more useful for less advanced students (E. Y. Kang & Han, 2015). With indirect feedback, the teacher indicates errors by circling or coding, leaving students to correct them (Ferris & Hedgcock, 2005). Although direct feedback has been found to minimise students' confusion about the teacher's use of error codes, indirect feedback is considered more effective in promoting students' engagement in problem solving (Ferris, 2006; Ferris et al., 2013). Moreover, Bitchener et al. (2005) affirmed that the combination of written and oral feedback was more helpful than written feedback alone. They also suggested that errors which are rule governed and analytically explicable (e.g., subject-verb agreement, run-ons, fragments) can benefit the most from corrective feedback. According to I. Lee (2017), such a combination of feedback types allows teachers to explain ambiguities and students to ask questions.

Despite the importance of teacher feedback at any stage of the writing process, teachers have been reported to have limited time to provide individual adequate feedback on student's works (Law & Baer, 2017). Due to large class sizes, giving timely feedback can put a burden on writing teachers (Ferris, 2007; I. Lee, 2017). It has been suggested that students should be provided comments on their work while they are producing it (S. Brown, 2015; Sambell et al., 2013). By introducing students to course material in advance of a class session, more class time can be allocated for writing practice and teacher immediate feedback.

Students are expected to play an active role in the assessment process, including providing and responding to peers' written/oral comments or feedback. Together with the shift from teacher-driven instruction to student-centred learning, self- and peer-assessment have been found to significantly affect students' essay writing performances and independent learning (Birjandi & Hadidi Tamjid, 2012). Peer feedback can encourage collaborative learning, contribute to learning autonomy, enhance students' attitudes to writing, and improve the quality of student interactions (T. Chen, 2016). It can also guide students to reflect more carefully on aspects of their own writing (Hicks et al., 2016). In Birjandi and Hadidi Tamjid's (2012) study with third-year undergraduate students, only the peer-assessment

group undertook further drafting and revision of their work.

Peer feedback has also been found to work effectively if students share similar English writing proficiency and disciplinary knowledge (Luo et al., 2020). In some cases, peer feedback tends to focus on local errors (e.g., vocabulary and grammar) rather than content issues (Leki, 1990). Although higher-proficiency students might have less confidence in the feedback given by their lower-proficiency peers, it has been shown that students' ability levels do not affect the amount and quality of peer feedback (Z. Wu, 2019). With proper training, L2 students have been found to provide valid feedback, the process of which is beneficial to both feedback givers and receivers (Rouhi & Azizian, 2013; Yu & Lee, 2016). In Rahimi's (2013) study of second-year undergraduate students, the group with training in peer review attended to more global areas and made significant progress in their paragraph writing, compared to the untrained group.

Nevertheless, challenges of time and space have been found to hinder feedback exchange among peers in face-to-face classrooms (Bower & Richards, 2006). Besides the traditional pen-and-paper mode of feedback, teachers have been recommended to capitalise on technology such as Google Docs to facilitate collaborative writing and peer assessment (Ebadi & Rahimi, 2017; Godwin-Jones, 2008). According to van Popta et al. (2017), lack of feedback can undermine students' motivation and attendance in online learning.

Due to the high social status of teachers in Vietnam, students in that country have been found to value a teacher's feedback and obey their instructions without asking questions (P. M. Nguyen et al., 2006). Dam's (2018) study of 90 Vietnamese second-year university students found that they were not active enough in asking teachers for clarification and suggesting their own corrections of complex errors (e.g., content and organisation). Vietnamese students have also been found to believe that peer feedback improves their writing quality in terms of content, organisation, and grammar/structure. V. P. H. Pham and Usaha (2016) found students' writing quality improved significantly in terms of the mean score and the length of the essays after the students received training in peer feedback. A study by N. L. T. Nguyen et al. (2021) of 97 English major students revealed that higher-proficiency students valued feedback on both linguistic accuracy and global issues (i.e., content, organisation, and style). Despite the value of feedback, Vietnamese students have been found to lack confidence in giving feedback, and they are not allowed sufficient time to do so (Ha & Nguyen, 2021; T. H. T. Pham & Gillies, 2010).

Vietnamese students have also been found under-prepared for writing, with their teachers tending to focus much more on assessing than on teaching (I. Lee, 2007b). To make a link between teaching, learning, and assessment, it has been suggested that teachers familiarise students with the assessment criteria (I. Lee, 2011). Lack of clarity about assessment criteria has been reported to be a source of anxiety for first-year students (Kift & Moody, 2009). With an awareness of the writing rubrics,

students become more familiar with how they will be assessed and what they must do to be successful (Hattie & Timperley, 2007).

2.2.3 Assessing EFL Academic Writing

Assessment has been shown to play a very important role in identifying students' levels of development; it can direct teachers' and students' behaviours to meet stipulated requirements (N. T. Carr, 2011; Cheng & Curtis, 2004). When assessment tasks and curriculum align, "there is an opportunity to claim that teachers are covering the necessary material to achieve desired educational goals" (Fulcher, 2010, p. 82). Otherwise, it is likely that some curriculum content will be disregarded to focus on what will be tested. Vo (2017) has noted that the educational system in Vietnam puts a large emphasis on exams, with both teachers and students more concerned about final test results than learning outcomes.

For writing assessment, learning outcomes are translated into a list of criteria (I. Lee, 2007a). Despite various writing assessments in academic contexts, the major criteria of standardised writing rubrics (e.g, International English Language Testing System [IELTS]; Test of English as a Foreign Language [TOEFL]) and those used at universities include task achievement, content, organisation, accurate sentence structure, grammar, and language, which refers to the ability to use appropriate words. The current study used criterion-referenced practice, which is based on a set of pre-specified criteria rather than the performances of other test-takers (Hyland, 2008a), to investigate students' achievements in specific, clearly defined writing subskills.

The most common classification of writing assessment is based on holistic or analytic rating scales (Alderson et al., 1995). For advocates of holistic scoring "writing is a single entity which is best captured by a single scale that integrates the inherent quality of the writing" (Hyland, 2003b, p. 227). However, different writing traits tend to develop at different rates for different writers (Weigle, 2002). Some student writers can be competent at expressing content but limited in grammatical accuracy, while others may have a good source of vocabulary but are unable to organise their ideas. As a learner might not perform similarly in each of the writing components, holistic scoring based on overall judgement can fail to distinguish between these aspects of writing performance and introduce validity issues (Iwashita & Grove, 2003; Kroll, 1990).

Analytic scoring, on the other hand, involves assigning separate scores for different aspects of writing, such as content, organisation, vocabulary, grammar, and mechanics (Normah, 2014), which makes it more suitable for identifying writers' strengths and weaknesses (Bacha, 2001; N. Carr, 2000). Comparing the analytic scales of raters, Knoch (2009) found that with the use of a more detailed analytic scale, raters could better differentiate between different writing traits, which resulted in higher reliability. The current study drew on analytic scoring for detailed information about students' writing subskills and rating consistency.

Effective EFL writing at basic and intermediate English levels is characterised by both global text features (e.g., content, organisation, and coherence) and local language features (e.g., vocabulary, grammar, and mechanics) (Ferris & Hedgcock, 2005; Hyland, 2003b). A highly rated composition is expected to include content relevant to topic, develop its thesis thoroughly, and address task requirements appropriately.

2.2.3.1 Coherence and Cohesion. Coherence and cohesion are concerned with clarity and fluency of the passage through appropriate paragraphing and linking devices, and research indicates they correlate significantly with EFL learners' writing quality (Crossley et al., 2016; W. Yang & Sun, 2012). Writing coherence involves logical connections at the macro level of a text (such as thesis statement and topic sentences) because it is considered vital that the reader be able to comprehend the writer's purpose and/or follow the writer's line of reasoning or argument (Crystal, 1991). Cohesion refers to the presence of grammatical and lexical markers that allow the reader to make connections at the micro level through words and sentences (Connor & Johns, 1990).

Grammatical and lexical cohesion serve to build connections between and within sentences (Halliday & Hasan, 2013). Grammatical cohesion relates to grammatical elements such as reference (e.g., he/she, this/that), substitution (e.g., one/ones, do/does/did), ellipsis (i.e., omission), and conjunction (i.e., linking devices such as moreover, therefore, afterwards). In lexical cohesion, connection can be made through reiteration (e.g., repetition, synonym) and collocation (e.g., associated lexical items).

Problems with cohesion in L2 writing have been observed in classrooms, with learners unable to unite paragraphs because of their inability to use cohesive devices appropriately (Scollon & Scollon, 1995). Liu and Braine (2005) found that first-year Chinese tertiary EFL students were generally incapable of using cohesive devices properly in their argumentative essays. Field and Yip's (1992) quantitative study of conjunctions in L1 and L2 writing revealed that many L2 writers misused and overused conjunctions such as "on the other hand" and "besides". Neff et al. (2004) noted a tendency to write long paragraphs with few explicit cohesive markers in the English compositions of Spanish students. Ferris (1994), when examining a corpus of 160 L2 students' compositions at different levels, found more lexical repetition in the less competent students' writing. V. C. Le and Nguyen (2010) identified a problem with the organisation of Vietnamese EFL students' essays: they lacked a clear logical flow and unity, as well as persuasive linear arguments. These authors advocate explicit teaching of writing coherence and cohesion.

2.2.3.2 Lexical Resource. Effective vocabulary use has been considered an important indicator of writing quality (Connor, 1990; Laufer & Nation, 1995; Nation, 2001). Engber (1995) argued that lexical diversity and accuracy have a significant effect on how L2 writers are judged. As Tonkyn (2012) hypothesised, these impressions might arise from raters consciously or subconsciously counting the number of different words used in an essay. In the current study, Text Inspector (Bax, 2012), a text

analysis tool, was employed for quantitative (instances of one particular word) and systematic (types of words and phrases used) explorations of the participating students' written texts.

Writing for academic purposes involves specialised knowledge of academic genres (Hyland, 2008a), with students expected to use lexis that is appropriate for the target genre (Gibbons & Cummins, 2002). Studies of Vietnamese contexts have found that most students did not meet the lexical demands for higher education. T. M. H. Nguyen and Webb's (2017) investigation into 100 Vietnamese English majors' knowledge of both single words and collocations (e.g., "heavy rain", "make a decision") indicated the students' limited knowledge of high-frequency words and collocations (based on Nation's (2012) word family lists). T. N. Y. Dang (2020) reported that over 90% of 442 non-English majored tertiary students did not master the most frequent 2,000 words after 10 years of formal English instruction, thus underscoring the need for greater focus on explicitly teaching and assessing lexical resource in academic writing.

As a pedagogical tool for teaching and testing academic words, Academic Word List (AWL) (Coxhead, 2000) includes 570 headwords that were compiled from a corpus of 3.5 million running words and account for approximately 10% of the total words (tokens) in academic texts. These word families are divided into 10 sublists, with the most frequent words in Sublist 1 (e.g., "analyse", "individual", "role") and the least frequent in Sublist 10 (e.g., "depress", "adjacent", "integrity"). The AWL, with academic English vocabulary prevalent in many fields, especially in arts, commerce, law, and science, has been extensively used in vocabulary testing (Schmitt, 2010), developing other word lists (Coxhead, 2015), and corpus analysis software (Anthony, 2014). Banister (2016), when surveying 193 teachers of academic English, found that the AWL was widely used by these teachers as a guide for materials design and as an instrument recommended for self-study use.

Control of particular phrases has played a pivotal role in shaping EFL students' writing performances (Teng, 2020). As suggested by Li and Schmitt (2009), the absence of lexical phrases in writing indicates the "lack of mastery of a novice writer in a specific disciplinary community" (p. 86). Erman and Warren (2000) found that different types of lexical phrases accounted for 52.3% of the written discourse investigated. However, with no clear rules governing the word sequencing, it is hard for non-native speakers to acquire such sequences. L2 learners have been found to use lexical phrases differently from native speakers (Granger, 1998). Previous studies have also revealed L2 learners' underuse or overuse of certain phrases (e.g., "As a result of . . .", "I think that . . .") (Erman, 2009; Howarth, 1998) but fewer hedging devices (e.g., "One could assume . . .", "It should be kept in mind that . . .") in academic writing (Y. Chen & Baker, 2010; Gilquin & Paquot, 2008). For teaching purposes, the Phrasal Expressions List compiled by Martinez and Schmitt (2012) consists of 505 multiword expressions focusing on the most frequent phrases in academic English such as "in terms of" and "take into account".

Another crucial element of L2 learning is metadiscourse, which refers to "the range of devices writers use to explicitly organise their texts, engage readers and signal their attitudes to both their materials and their audience" (Hyland & Tse, 2004, p. 156). In Hyland's (2005) model of metadiscourse, there are two main categories: interactive resources and interactional resources. Interactive resources enable the writer to manage the information flow to clarify intended interpretations (e.g., transitions: "in addition"; frame markers: "to conclude"). Interactional resources, on the other hand, involve the readers in the text and display the writer's personality (e.g., engagement markers: "you can see that"; attitude markers: "surprisingly").

The use of appropriate metadiscourse markers can maintain cohesion since these linguistic devices signpost the various relationships (e.g., argumentative, conjunctive, causal, additional) between sentences, paragraphs, and other textual units (Intaraprawat & Steffensen, 1995; Schiffrin et al., 2001). However, EFL student writers have been found to misuse metadiscourse resources, with their writing assessed as "uncontextualised, incoherent and inappropriately reader-focused" (Hyland, 2005, p. 176). Recent research on metadiscourse markers in written texts suggests that their overall use increases as learners progress from novice to intermediate writers (Bax et al., 2019).

2.2.3.3 Grammatical Range and Accuracy. Previous studies have indicated that while Vietnamese students deal with exercises in grammar well, they fail to apply correct grammar in writing or speaking (T. H. Nguyen, 2015; T. H. A. Nguyen, 2002). Therefore, grammar – the set of rules specifying the correct arrangement of words at the sentence level – was one aspect of student essays that was assessed for this study. Grammatical range and accuracy focus on using appropriate grammatical structures and punctuation. The application of accurate grammar has been considered an important aspect of academic writing (Celce-Murcia, 1991) and ensures the writer's intended meaning (Larsen-Freeman, 2003). For a text to be cohesively written, attention should be paid to the expression of meaning through grammar (Muncie, 2002). Despite criticism of teachers' grammar correction (Truscott, 1996), the process-genre approach places grammar more centrally than the process approach; all texts are expected to conform to grammatical conventions (Tribble, 1996). Explicit grammar instruction has been shown to be effective in improving the quality of L2 production (Dixon et al., 2012; Ellis, 2006; Friedman, 2007; Nazari, 2013).

Trinh and Nguyen (2014) observed that in some undergraduate writing courses in the southern regions of Vietnam, language teachers tended to pick out some sentences from a sample text for their students to study grammatical structures. Due to the focus merely on language forms in these writing classes, the students were not fully prepared in terms of how and what to write effectively. In such cases, it has been suggested that grammatical features should be taught in context, with a close relationship between form and function (Y. Kim & Kim, 2005).

The current study arose from concerns about teaching EFL academic writing in Vietnam. As writing

instruction often follows form-focused and teacher-fronted approaches, students may have been deprived of the opportunity for meaningful writing activities and diverse types of feedback (self-, peer and teacher assessment) (Birjandi & Hadidi Tamjid, 2012; Y. Kim & Kim, 2005; Rahimi, 2009). With recent technological advancements, new modes of teaching are expected to provide students with a significant extension of language experiences.

2.3 Educational Technologies in EFL Academic Writing

As this study is concerned with how educational technologies are used in the classroom, it has drawn on research into linking technologies with EFL practice, particularly writing. Technology has improved the quality of input and allowed communication to be authentic and feedback to be timely and relevant (Darus et al., 2008; Li, 2005; Suzuki, 2011). It also offers teachers affordances to personalise learning for their students (Sturgis & Patrick, 2010). Video resources and online websites allow students to learn the target language in their preferred time and locations. In the classroom, technology helps students develop self-regulation abilities (Schneckenberg et al., 2011; Winters et al., 2008). T. T. Dang and Robertson (2010), when examining the impacts of Moodle, a learning management system (LMS), during 16 weeks of a Listening-Speaking course, found an increase in Vietnamese students' autonomy. These findings raise questions about how technologies can not only change the roles of teachers and students, but also reinforce existing practices.

Researchers have reported positive findings associated with the effects of technologies on students' development of English skills. Lim (2014) found that with the use of websites and digital resources, Chinese EFL learners were able to do vocabulary building tasks more effectively by searching for the required vocabulary, and to build larger and richer vocabulary combinations. However, information overload might frustrate some students (Lim, 2014). Kiliçkaya's (2015) study with 50 Turkish EFL students revealed higher scores in a group receiving both computer-based and teacher-driven grammar instruction than in a group receiving traditional instruction. Collaborative writing tools such as wikis, Google Docs, and blogs have significantly helped students develop academic writing skills (Bloch, 2008; Ebadi & Rahimi, 2017). Involvement in an online interactive environment to cooperate and accomplish the required writing assignments can result in more equal participation of students who have different proficiency levels (Warschauer, 2002).

In terms of feedback, automatic corrective feedback has been effective in promoting EFL writing accuracy (Li et al., 2015; C.-H. Wang et al., 2013). In C.-H. Wang et al.'s (2013) study, the students in the experimental group with automatic writing evaluation made significantly fewer errors than those in the control group with teacher feedback. However, Ranalli (2018) has noted that a limitation of automated feedback lies in its one-size-fits-all nature and low accuracy rate. Research into online peer feedback by Chang (2012) revealed that asynchronous feedback exchange produced the greatest number of local-level comments; however, the students said they felt frustrated when trying to figure

out what their reviewers meant. Giving online feedback on local issues (e.g., vocabulary and grammar) should allow teachers more class time to focus on higher-level problems (e.g., content and discourse).

Recognising the gaps in Vietnamese EFL education such as time constraints and students' low learning motivation, researchers have studied technology-enhanced language learning in Vietnam. H. T. Dang and Nguyen (2014), in their exploratory study with 149 Vietnamese university students, found that while most (82.6%) had positive attitudes towards technological use in EFL learning, they spent more time using technologies for non-educational purposes than for English study. Similar results were noted in a recent study by L. A. T. Nguyen and Habók (2021) on digital literacy levels of 1,661 EFL students at Vietnamese universities. Although most of those students had access to digital technologies at home and in their institutions, they did not take advantage of digital applications in language learning. Moreover, H. A. V. Nguyen et al. (2018) found that students in some remote areas may confront the challenge of inadequate technological tools such as mobile devices, laptops, or internet access.

An investigation into how technology affects EFL Vietnamese students' academic writing revealed greater writing progress and more positive attitudes of the experimental group that was receiving technological assistance (van Rensburg & La, 2021). In the same way, T. M. L. Tran and Nguyen's (2021) study reported English-major first-year students' optimistic feelings about technology-based communication, positive attitudes towards writing lessons, and improvements in essay organisation and expression of ideas. However, no significant progress was noted in lexical resource and grammar.

In regard to Vietnamese teachers' attitudes, a study by Peeraer and Van Petegem (2010) of 783 teacher educators in five teacher institutions in North and Central regions showed that Vietnamese teachers and educators held positive attitudes towards technologies for education because of their awareness of the potential benefits. Other reports indicate that teachers' beliefs in the effectiveness of technological integration and their confidence in technological competence contribute to their decisions to apply educational technologies (Y. Lam, 2000; Spotts, 1999). For successful integration, Y. L. Chen (2008) recommended teachers be aware of the technological tools that are suitable for a particular task and know how to use them.

Kirkwood and Price (2012) identified three applications of educational technologies: "replicating existing teaching practice, supplementing existing teaching, and transforming teaching and/or learning processes and outcomes" (p. 11). The flipped classroom (FC) has become a growing trend in education for the third purpose – teaching and learning transformation. By using an online learning platform, student interactions and collaborations are confined to neither the brick-and-mortar classroom nor the contact hours in it. Classroom time is then maximised for learning activities that apply and practise the newly acquired knowledge at a deeper level (Koh, 2019). This FC approach is expected to enhance language input/output and encourage more student-centred activities in Vietnamese EFL contexts.

2.4 The Flipped Classroom (FC)

The FC is based on making the best use of technologies in classrooms through two modes of learning: online learning and in-class learning. In an FC, the learning process is reversed, with lectures taking place online and "homework" done in the classroom. The concept of flipping the classroom by assigning materials for lesson preparation is not recent (J. W. Baker, 2000; Berrett, 2012; Touchton, 2015). King (1993) proposed switching the role of the teacher "from sage on the stage to guide on the side" to facilitate students' active learning strategies other than through lectures. E. Mazur (1997), a physics professor at Harvard University, suggested using peer instruction to enable students' construction of new knowledge. By adding pre-recorded lectures, a group of economics professors then created the term "the inverted classroom" in which "events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa" (Lage et al., 2000, p. 32). In this way, students could choose their own ways of learning to achieve the desired outcomes.

The "classroom flip" was first used by J. W. Baker (2000) with a combination of active learning strategies and technological trends that placed students at the heart of the learning process while engaging in both in-class and out-of-class work. It was not until 2007 that the FC was made popular among educational practitioners by Bergmann and Sams, two chemistry teachers in Colorado (Davies et al., 2013; Tucker, 2012). Their videoing of lectures was, at first, responsive to the needs of the absentees to catch up with their missed lessons. They later realised that by moving the lectures outside class time, face-to-face sessions could focus on hands-on activities, such as experiments or projects. In a TED Talk (i.e., influential videos from expert speakers) in 2011, Salman Khan, the founder of Khan Academy (a non-profit educational organisation that provides free online instructional videos), emphasised transforming the classroom into a more interactive learning environment through flipped learning.

There have been lots of understandings of what the FC model entails. The Flipped Learning Network (2014) defines flipped learning as

> a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. (p. 1)

Although technology has paved the way for flipping the classroom with videos and online materials, the key difference with FCs is not technological but pedagogical (Correa, 2015; Mehring, 2018). Traditional classrooms tend to be silent, with students typically facing the board at the front while listening to the teacher lecture to them. The students' practice of new knowledge is mostly done at home

without support from their peers and teacher. FCs reverse this paradigm, shifting what has traditionally been conducted in class to independent pre-class work. The presentation of new content in the form of videoed lectures enables students to learn in their desired time and place. They can pause the video to take notes and process information at their own pace, as well as rewind and review any part of the video to have a deeper understanding (Bormann, 2014; Talbert, 2012). With pre-class study, students can participate in more advanced activities in class, thus enhancing their learning performance (Hung, 2015; Strelan et al., 2020; Zappe et al., 2009; Zou et al., 2020), engagement (Davies et al., 2013; Dill, 2012; M. K. Kim et al., 2014; G. Lee & Wallace, 2018), and motivation (McLaughlin et al., 2014; Strayer, 2012; Zou et al., 2020).

Individualised instruction is one of the biggest challenges facing language teachers, as students come in with a variety of language abilities, learning goals, and learning styles. Especially in teaching writing, EFL teachers often struggle to help students overcome ineffective writing strategies and negative attitudes towards writing and feedback (Gebhard, 1996). In a traditional classroom, students of various English proficiency levels need to follow the teaching pace of the teacher. This can disadvantage the less capable students who might not comprehend the in-class lesson activities and thus find it difficult to do their homework. The FC approach solves this problem. Being able to view videos or read materials multiple times before class allows students to practise the new content in class and clarify any difficult concepts with the teacher's help (G. B. Johnson, 2013). Incorporating the flipped model in academic writing exposes students to the key concepts of writing and language input via videoed lectures and online tasks, and allows them more class time to practise writing. Students also work collaboratively with their peers and improve their writing skills by receiving instant feedback on their writing.

To deal with classroom diversity, the flipped model offers tools and resources to make the most of learning experience, both inside and outside the classroom. The proliferation of online resources such as Khan Academy, Coursera, TED Talks, and YouTube has provided access to instructional videos and other interactive elements for teaching and learning (Arnold-Garza, 2014). Students can also get access to a range of resources to learn grammar rules and structures (Evseeva & Solozhenko, 2015). Access to extensive online resources can offer students learning opportunities that would not be available to them in a traditional classroom (Sharpe et al., 2006).

Moreover, the time saved by shifting content delivery online enables teachers to engage more with their students. Teachers can get real-time feedback on in-class activities and discern which specific topics may be causing trouble for their students (Correa, 2015; Lo & Hwang, 2018). As well, struggling students who hesitate to ask questions in class can receive individual support during the feedback sessions they have with their teacher. Both teachers and students have reported that enhanced interaction is one of the most valuable features of the FC (G. B. Johnson, 2013; Roehl et al., 2013;

Snowden, 2012).

It has been suggested that students' pre-class preparation will result in improved study quality (Goedhart et al., 2019). Students need to prepare properly for the lesson, otherwise the teacher cannot engage with them at an advanced level in the classroom. The FC approach requires students to be self-motivated and responsible for their learning performance (Birgili et al., 2021; Smith, 2015). Without student engagement in the assigned pre-class or in-class activities, the FC will fail to support effective learning (Kachka, 2012).

As accessibility of the online materials is strongly correlated to students' satisfaction in pre-class learning, students need training in how to operate technology so they can learn more effectively online (Ramnanan & Pound, 2017). Teachers should ensure the accessibility and relatedness of materials to sustain students' engagement in online activities (Akçayır & Akçayır, 2018).

Both teachers and students may find it uncomfortable to switch from traditional instruction to independent learning instruction (Blau et al., 2016; Blau & Shamir-Inbal, 2017; Talbert, 2015). The increased time and effort expended on designing course materials have been called the teachers' external barriers (Wagner et al., 2013). Meanwhile, students familiar with lecture-based classroom environments might initially resist the concept of FCs due to an underlying fear of the shift in their responsibility for learning (L. L. Chen, 2016; Lage et al., 2000) and of their additional workloads (M. K. Kim et al., 2014; Lage et al., 2000; Missildine et al., 2013). An FC approach carries with it the risk of cramming content into an online learning environment, which can lead to information overload for students (G. B. Johnson, 2013; Wagner et al., 2013). Consideration of students' workloads is, therefore, vital to their acceptance of extra out-of-class tasks (N. Kang, 2015).

The research literature has broadly identified positive student responses to flipped learning (Doman & Webb, 2014, 2015; Quinn & Kennedy-Clark, 2015; Soliman, 2016). In recent years, the FC has become an area of interest in L2 learning, especially in EFL classes (Turan & Akdag-Cimen, 2020). While most research has relied upon the participants' perceptions of their own experiences in the FCs (Egbert et al., 2014; Soliman, 2016; Webb et al., 2014; Zainuddin & Attaran, 2016), relatively few studies have referred to changes in student attitudes when reverting from FC to a traditional model. Several studies have shown significant differences in writing performance of EFL students in the flipped class when compared to the traditional class (Afrilyasanti et al., 2016; Farah, 2014; Jehma, 2016; Leis et al., 2015; Mireille, 2014).

Leis et al. (2015) compared two English composition courses (using traditional and flipped methods) for 22 Japanese tertiary students over 10 weeks. The results indicated that the participants under FC intervention tended to spend significantly more time on class preparation and produce considerably more words in post-test compositions. They were also reported to make greater progress in writing

proficiency due to the opportunities for explanations and for direct and immediate individual feedback from their teacher. To discover more about the effectiveness of FC in addressing students' writing difficulties, more investigation of student achievements in each of the writing elements is needed.

Jehma (2016) investigated the effect of an FC model on the writing performance of 20 Thai EFL students in terms of organisation, accuracy of facts, spelling, punctuation, and focus on the assigned topic. The results from the pre- and post-tests indicated an increase in the students' post-test scores, and the course evaluation data confirmed student satisfaction with the flipped model. An important issue of Jehma's study is the absence of a control group which may affect internal validity, making it hard to verify the effect of the FC intervention.

A study in South Korea by G. Lee and Wallace (2018) was undertaken in the same English course over two consecutive semesters. Of the 79 participants, 39 followed a communicative language teaching approach, and 40 were given flipped instructions. Data were collected from the students' task scores, students' surveys, and the teacher's notes on students' learning engagement. The findings demonstrated more student engagement and higher average scores in the FC group than in the non-flipped group. However, no significant improvement was noted from the scores of their final writing task, an outcome which suggests the need for further research in the effects of the flipped approach on EFL writing competence.

Zou and Xie (2019) made a comparison between an FC model with technology-enhanced, just-in-time teaching (JiTT) and peer instruction (PI) and a conventional FC over six writing sessions. Sixty-six upper-intermediate EFL students in Hong Kong were examined for their writing skills, motivation, and critical thinking. In the JiTT and PI model of FC, the students carried out some pre-class online assignments, and then undertook collaborative discussions and writing tasks in class. The conventional FC followed the same processes without scaffolded learning experience. Pre- and post-questionnaires and follow-up interviews were conducted to identify the changes in the students' motivation and their tendency towards critical thinking. Their final scientific reports were marked on four criteria – content, organisation, language, and convention – and compared to a diagnostic writing test. The JiTT and PI model of FC was found to surpass the conventional FC model in promoting the students' English writing skills, motivation, and tendency towards critical thinking.

Luo et al. (2020) proposed an implementation of a Flipped Learning Wheel (FLW) writing approach to teaching. The findings from a survey and three rounds of interviews with eight L2 writing teachers suggested that the FLW can be applied in real-life teaching. However, empirical studies based on this process design are required to examine the effects of a flipped L2 writing class on students' achievement and engagement.

Fathi and Rahimi (2020) explored the impact of FC on 51 Iranian EFL students' writing performance

and writing complexity, accuracy, and fluency (CAF). The control group was taught using a traditional mode in 16 sessions, while the experimental group was taught using a flipped learning mode in 10 sessions. The students' global writing performance (i.e., content and organisation) and writing CAF were investigated across the pre- and post-tests. Statistical analyses revealed that the FC significantly enhanced the students' global writing performance and writing fluency, compared to the traditional classroom. Using both qualitative and quantitative data would have triangulated these results.

Inconsistent results about the effect of FCs on students of different proficiency levels have been observed. Setren et al. (2019) found the FC model exacerbated the achievement gap and produced no long-term gains in learning. However, Talbert (2020) raised issues about the construct validity of Setren et al.'s discussion paper. On the other hand, a study by He et al. (2016) indicated that flipped instruction benefitted students uniformly, regardless of their prior academic profile.

Nouri (2016), when comparing the effectiveness of FCs between high and low achievers in a Swedish university, found no significant differences in their attitudes toward flipped learning. However, compared to the high achievers, the low achievers appreciated the use of pre-class videos more and had higher perceived learning gains. It should be noted that the results were based on students' self-declared perceptions when first experiencing the FC and not on their actual performance as measured by assessment tasks.

Sergis et al.'s (2018) work built on educational data and evidence from three different applications of FC across diverse K–12 subject domains. They reported a consistent pattern of positive findings about the capacity of FCs to improve the students' learning outcomes and experiences, with a particular added value for low performers. P. Lee et al. (2019), when investigating the influence of FC on low-proficiency EFL students' academic writing performances, also noted an increase in their confidence and performance. Running a control group would allow for deeper insights into how students of different levels can progress under FC and traditional interventions.

There has been concern about the long-term effects of a flipped approach. He et al. (2016) conducted a study with the participation of 677 students in a US chemistry course of 10 weeks. The findings revealed that flipped learning did not promote student motivation or perceived overall class quality. The participants' preference for flipped learning over traditional lectures was not apparent, with about one fifth of the students strongly favouring it and one fifth fiercely opposing it. The criticism was levelled at videos and class-related issues and came from those accustomed to traditional lectures. The overall effect of the intervention was more pronounced at the beginning of the course, but it declined over time due to the students' non-compliance with pre-class study. Similarly, Setren et al.'s (2019) study with 29 instructors, 80 class sections, and 1,328 students in two undergraduate courses in the US demonstrated the possibility of a diminishing flipped learning effect at the end of the course. However,

in Setren et al.'s study, only three flipped sessions were conducted within week in the middle of the 15-week semester, thus indicating the need for increased exposure to flipped instruction.

The application of FC in Vietnam is still in its infancy, with flipped instruction a relatively under-researched area. Thai et al. (2017), when comparing an FC setting to blended learning, e-learning, and traditional learning settings, found the FC setting had positive effects on learning performance, self-efficacy beliefs, and intrinsic motivation, but no significant differences in the perceived flexibility offered by the four research conditions. H. A. V. Nguyen et al. (2018) investigated the perceived challenges of 34 second-year English major students in a flipped English grammar class. Qualitative data from an open-ended questionnaire and semi-structured interviews revealed students' difficulties with self-regulation, heavy workloads, lack of immediate support, and lack of technological resources during the FC. T. T. Nguyen (2021) examined the effects of FC on students' perception and the quality of their assignments, together with the teacher's self-reflection. Twenty-one Vietnamese tertiary students attending an academic English course participated in the 8-week study. The findings based on survey, feedback forms, teacher's reflections, and analysis of students' work indicated the teacher's and students' positive perceptions of the FC. Analysis of the end-of-course assignments showed a sound mastery of essay genres, argument development, and text selection. However, stronger statistical analysis would be needed to substantiate these arguments.

2.5 Theoretical Frameworks for FC

The FC is a further step in the student-centred learning continuum (Mohan, 2018). The current study is grounded in the theories of self-determination, self-regulated learning, and social constructivism, as well as the four pillars of FC and Technological Pedagogical Content Knowledge (TPACK).

2.5.1 Self-Determination Theory

Self-determination theory (SDT) states that the level of motivation impacts the amount of effort students expend on a learning activity, which then influences their performance and levels of satisfaction. It has been suggested that students become self-determined when their psychological needs for "competence", "autonomy", and "relatedness" are fulfilled (Deci & Ryan, 2000). Competence relates to students' capability to learn and deal with challenges. Autonomy is associated with the willingness to invest time and energy in learning. Relatedness refers to the need to participate in tasks that allow interaction with peers and teachers. According to Loewen (2014), deep learning can only be acquired with high levels of motivation and engagement, which results in effective language acquisition in the long term.

In language education, Gardner and Lambert (1972) differentiated two dimensions of motivation: integrative motivation and instrumental motivation, a distinction similar to that between intrinsic and extrinsic motivation in SDT (Deci & Ryan, 2008). Integrative or intrinsic motivation, in this instance,

refers to students' willingness to learn due to interest and desire to communicate with members of the L2 community. Instrumental or extrinsic motivation is associated with the expectation to gain practical benefits that language proficiency might bring about, such as better job prospects. Extrinsically motivated students have been found to demonstrate a certain level of self-determination if they see the importance of engaging in the task (Deci & Ryan, 2012).

The FC model is considered more dependent on students' motivation than the traditional model (Abeysekera & Dawson, 2015). Motivation is assumed to influence the extent of learning effort (Payne, 2012) and determine the success of an FC (Abeysekera & Dawson, 2015). In the FC, students are likely to lower the affective filter, i.e., anxiety, motivation and self-confidence (Krashen, 1982), because of their familiarity with topics before class, which may lead to increased motivation to produce the language and reduce their anxiety about making mistakes. Acknowledging students' motivation has been suggested as a way of helping teachers design meaningful and purposeful writing tasks in line with students' motivation (Meyer et al., 2014).

Research has shown that motivation positively correlates with students' academic achievement and course satisfaction in online learning environments (Artino & McCoach, 2008; C.-H. Wang et al., 2013). A highly motivated student would be more likely to participate in learning activities and have a better sense for managing learning effort (Ames & Archer, 1988; Nolen, 1988). Students with low levels of motivation have been found demotivated in cases of perceived increasing workload (Zou, 2020). It is more likely for these students to lag behind when they fail to complete the pre-assigned tasks in the FC (Siegle, 2014). Therefore, FC could be more suited to students who are more intrinsically motivated than those who are not (He et al., 2016).

Technology should not be presumed to motivate all students equally. For Stockwell (2013), "Technology use does not result in automatic motivational increases in teachers or learners, particularly where there is stress regarding availability of technology and skills in using them effectively" (p. 170). They should be trained to become competent to use technological affordances in their teaching and learning. In the same vein, Shimamoto (2012) argued that active learning environments do not shape up spontaneously. The use of appropriate motivational strategies and the development of social interaction, i.e., a sense of relatedness, are needed to promote pleasant and supportive learning environments, both online and in class.

Research has suggested that the low English proficiency of Vietnamese students is often attributed to their low motivation (Ngo et al., 2017). Despite the commonly held perception of Vietnamese students' extrinsic motivation, L. T. Tran (2007) and Phan (2010) have argued that they can be intrinsically motivated to learn if given appropriate methods and materials. Phan's (2010) qualitative case study revealed that the motivation of Vietnamese English major students was influenced by their

perceived value of learning English, their learning environments, and their social networks. Although FCs have been found to enhance students' motivation (McLaughlin et al., 2014; Strayer, 2012; Zou et al., 2020), motivation towards the writing subject under FCs is still insufficiently explored, especially in EFL Vietnamese contexts.

As student engagement is a prerequisite for learning success, it is critical to build strong student participation in both face-to-face and virtual environments for the effective application of FCs (Y. W. Lam et al., 2018; F. H. Wang, 2017). Students' engagement is defined as the degree of attendance and interest towards educational activities (P.-S. D. Chen et al., 2008), and composed of three constructs, namely behavioural, affective/emotional, and cognitive (Fredricks et al., 2004). Student online engagement is concerned with the time and energy students invest in the process of online learning to achieve their learning goals (Ma et al., 2015). In virtual learning environments, behavioural engagement is related to learning activities such as asking questions and involving in online communications; affective engagement refers to students' emotional reactions towards their teachers, their peers, and the online content; and cognitive engagement is defined as the cognitive efforts needed for learners to acquire complex knowledge or develop specific skills in the context of online learning (Jung & Lee, 2018). Of these three elements, behavioural engagement is usually considered the easiest to access and document (Reschly et al., 2020). Therefore, students' participation can be observed through the pattern of their online behavioural engagement (Sun & Bin, 2018).

2.5.2 Self-Regulated Learning Theory

Self-regulated learning refers to students' control over their mental capacity to achieve the goals through three cyclical phases (Zimmerman, 2000). In the "forethought" phase, students analyse the learning task, set goals, and plan to use the most appropriate strategies. In the "performance" phase, students use strategies to complete the task, and maintain their motivation and time-management for achievement. In the "self-reflection" phase, students evaluate their own performance and the effectiveness of the strategies they used. Self-regulated learners exhibit motivation, persistence, and effective learning strategies such as time management and help seeking (Pintrich et al., 1993), and thus are more likely to achieve academic success (Donker et al., 2014).

The quality of students' preparation before class and their engagement during in-class activities have been found to depend on self-regulated and self-directed skills (He et al., 2016; Lai & Hwang, 2016). From a self-regulated learning perspective, writing activities are perceived as "self-planned, self-initiated and self-sustained processes" (Zimmerman & Risemberg, 1997, p. 73). For that reason, students' writing development depends on their level of self-regulation (Graham & R. Harris, 2000). Self-regulated learners of writing can manage resources, summon the effort needed, and capitalise on external feedback to achieve their goals (Nicol & Macfarlane-Dick, 2006).

In EFL contexts of product-oriented writing instruction, students' passivity often results in their lack of interest and self-regulation in academic writing (Teng et al., 2021). As students in an FC can interact with the pre-class content at their own pace and in their own way, it has been suggested that flipped learning directly enhances self-regulated learning (Fulton, 2012; O'Flaherty & Phillips, 2015; Sakulprasertsri, 2017; Shyr & Chen, 2018). Students can monitor and evaluate their own learning progress through online tasks posted on learning management systems (LMS) such as Moodle and Blackboard (DeLozier & Rhodes, 2017).

Research also suggests that for the success of FCs, students are required to self-regulate their online learning activities (He et al., 2016). Students with low self-regulation often have difficulty adapting to the FC model, and they fall behind in in-class activities because of their failure to watch the pre-class videos (Y. L. Chen et al., 2014; Mason et al., 2013; McLaughlin et al., 2014). Students who can regulate their own learning processes have been found to benefit more from an FC in terms of higher learning outcomes (Lai & Hwang, 2016; Shibukawa & Taguchi, 2019).

As mentioned earlier, in Vietnamese pedagogical contexts, teachers have long been considered knowledge transmitters, and students passive recipients (V. C. Le, 2001; V. L. Nguyen, 2011). Students familiar with traditional lectures and teacher-directed models might initially resist taking control of their own learning in an FC (H. A. V. Nguyen et al., 2018).

2.5.3 Social Constructivism

Social constructivism is a learning theory based on Vygotsky's (1978) theory that knowledge is accreted through social interaction rather than passive reception. Consistent with the constructivism theory of learning, FC approaches devolve more responsibility to students for their learning (Basal, 2015; K. J. Kim & Bonk, 2006). Flipped learning takes place in a context where there is interaction among people (students and teachers), instruments (videos, books, handouts, etc.), and organised activities. Before-class instruction allows students to learn the basic concepts on their own and apply the knowledge during class time. Capitalising on their students' pre-instructional preparedness, teachers can play the role of facilitators, and they are expected to create an engaging, collaborative environment for students to solve problems and master skills (Aljohani, 2017; Bishop & Verleger, 2013; Mintzes, 2020). In this fashion, the students do not passively receive knowledge, but actively engage in co-constructing it through social interaction and peer feedback (Perkins, 1999; Sternberg, 2008; Tobias & Duffy, 2009). They can take charge of their learning and choose the best strategies that work for them.

In L2 learning, the interactive environment can incorporate the social learning aspect of Vygotsky's theory (Warschauer et al., 1996). By using technologies for content delivery outside the class, more in-class time can be saved for cooperative learning activities, and students can benefit from peer-to-peer

connections (Bergmann & Sams, 2012; Fulton, 2012; Lo & Hwang, 2018; Strayer, 2012; F. H. Wang, 2017). By maximising both individual attention from a teacher and opportunities for pair/group work, the FC creates a more interactive and collaborative learning environment where students can co-construct knowledge, engage deeply with their writing, and increase their awareness of their writing problems (Hedge, 2005; Storch, 2005; Swain, 2000).

The two core tenets of Vygotsky's (1978) theory of social constructivism are "the more knowledgeable other" (MKO) and "the zone of proximal development" (ZPD). The MKO refers to someone with a higher level of knowledge than the learner; through interaction and collaboration with more proficient peers, students can develop their own skills and reach a higher competency (Donato, 1994). The ZPD refers to the distance between what students can do independently without assistance (the actual level) and what they cannot do without the assistance of others (the potential level). For learning to be effective, it is important to keep the learning goal within the ZPD. A learning goal that is lower than the ZPD will be of no benefit to the student, and one that is beyond the student's current competence will be found frustratingly difficult and probably unachievable. These aspects of Vygotsky's (1978) theory provided a framework for the design of flipped learning activities in this study.

In a traditional classroom, a large amount of in-class time is largely spent on lower-order activities, while higher-order activities are undertaken outside class time (Nobles & Paganucci, 2015). FC operates in accordance with the learning theory of Bloom's revised taxonomy(Anderson & Krathwohl, 2001). In an FC, students engage in lower order thinking tasks (remembering, understanding) through video lectures, handouts, and basic practice outside of the classroom. Classroom time is then devoted to higher order thinking tasks (applying, analysing, evaluating, creating) that may include presentations, role-play, discussions, and problem-solving with the support of teacher and peers (Albert & Beatty, 2014; Bergmann & Sams, 2012; Y. Shi et al., 2020; Tucker, 2012).

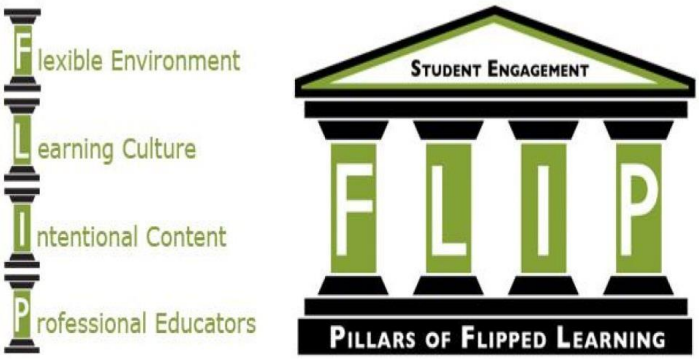
2.5.4 Four Pillars of Flipped Learning

The four pillars of flipped learning are: *flexible environment, learning culture, intentional content* and *professional educators* (Flipped Learning Network, 2014; Hamdan et al., 2013), as illustrated in Figure 2.1.

Flexible environment provides a variety of learning modes (i.e., online and in-class instructions). Students are offered various learning paths; they can freely make their choices of where and when to learn. In this sense, FCs meet the needs of the 21st century students for more personalised learning (Staker & Horn, 2012). With new knowledge introduced before class, students have more chance to reflect on their learning and apply their learned knowledge.

A shift in *learning culture* from a teacher-led classroom to a student-centred one allows students to actively engage in the learning process through exploring, discussing and co-constructing knowledge.

Figure 2.1.
The Four Pillars of Flipped Learning



Source: Flipped Learning Network (2014)

According to Gough et al. (2017), FC is a great platform for active learning although the teachers in their study did not perceive improved student learning.

An *intentional design of content* refers to teacher decisions on what to teach and what for students to explore in order to develop as much as possible a variety of skills and competencies. In a flipped writing classroom, for example, the teacher needs to decide how a genre should be taught via video lectures and what writing practice students should be involved in. The FC approach may better adjust online and face-to-face activities to suit student ability (P. Lee et al., 2019).

Although teacher role is less visible in an FC, teachers, as *professional educators*, play an important part in monitoring student performance and offering instant feedback and assessment to ensure no gaps in student knowledge (Hamdan et al., 2013). By freeing class time from lectures, teachers have more time to scaffold, supervise and facilitate student learning.

Flipped instruction has been assumed practicable in language programs as it aligns with theoretical approaches to second language acquisition (Haghighi et al., 2019). In this study, the key concepts - *flexible environment, learning culture, intentional content* and *professional educators* - underpin both the flipped learning pedagogical designs and the analyses of the participating students' FC learning experiences.

2.5.5 Technological Pedagogical Content Knowledge (TPACK)

For an effective integration of technology in the flipped writing classroom, the Technological Pedagogical Content Knowledge (TPACK) framework developed by Koehler and Mishra (2009) was applied in this study. The TPACK framework, an extension of the pedagogical content knowledge (PCK) model (Shulman, 1986, 1987), focuses on content knowledge (CK), pedagogical knowledge (PK) and technological knowledge (TK):

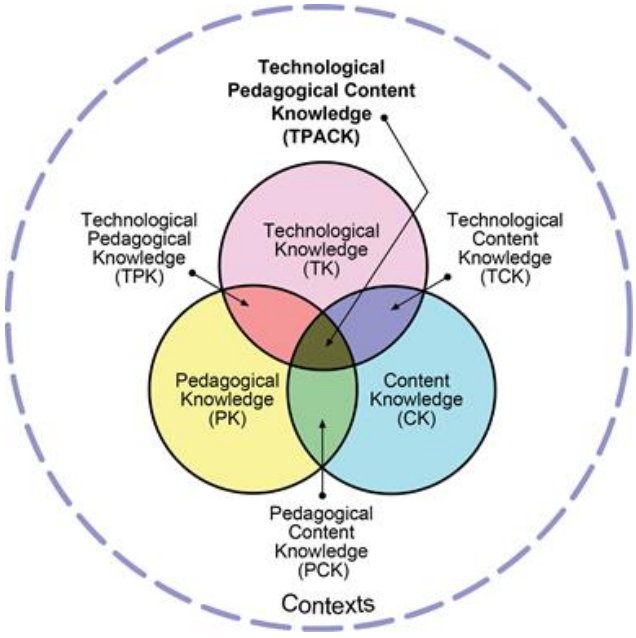
- *Content Knowledge* (CK): Knowledge about the subject matter to be instructed. CK differs

according to each discipline and grade level.

- *Pedagogical Knowledge* (PK): Knowledge about approaches, methods, and teaching and learning techniques. PK applies to features such as the understanding of student learning styles, classroom management skills, lesson planning, and assessments.
- *Technological Knowledge* (TK): Knowledge about ways to apply tools and resources into teaching. TK concerns considering the possibilities of using technology for a specific subject area, weighing its pros and cons, as well as continual familiarisation with and adaptation to new technological affordances.

These three knowledge areas are intertwined, not separate (see Figure 2.2). The interaction between pedagogy and content is related to understanding the best practices for teaching specific content (PCK) (Shulman, 1986). The interaction between technology and content implies that teachers must understand how diverse content may influence the type of technology to be applied (TCK). The interaction between technology and pedagogy refers to understanding how certain technological tools can help teachers attain their teaching objectives (TPK). Teachers need to know which technology resources are available and appropriate for addressing the subject matter and enhancing student learning experiences. In other words, the TPACK framework helps teachers make the best connection between what is being taught to the way it is taught with the technology used.

Figure 2.2.
Technological Pedagogical Content Knowledge (TPACK)



(Reproduced by permission of the publisher © 2012 by tpack.org)

TPACK has been used to analyse how teachers blend the technology, pedagogy, and content of a lesson. Ansyari (2015), when analysing 22 articles about TPACK arrangements, emphasised the

provision of authentic learning environments, intensive training, and sufficient time for practice. Teachers' technological and pedagogical proficiencies and course management skills have been found to determine the efficiency of flipped learning (Lo & Hwang, 2018). Through the course content delivery using TCK- or TPK-related skills, teachers provide students with opportunities to master the pre-assigned content outside the classroom. Similarly, through the implementation of higher-order language tasks using TCK- or TPK-related skills, teachers help students apply what they have learned to fulfil those tasks. Without alignment between pre-class work and face-to-face activities, and connection between formative assessments and in- and out-of-class activities, students have been found less likely to engage in either dimension of flipped learning (O'Flaherty & Phillips, 2015).

Vietnamese EFL teachers have been found confident about their pedagogical and content knowledge (PCK) (T. T. H. Nguyen, 2021), but not well trained in using educational technologies (N. T. Hoang, 2015). A study by H. T. B. Dinh (2009) conducted with L2 Vietnamese novice teachers revealed that inappropriate professional development and limited access to technical support and equipment hampered their use of technologies in teaching practices. Dinh's findings accord with those of Peeraer and Van Petegem (2010) regarding the need to develop teachers' technological skills as part of their professional development. It can be hypothesised that with technical and professional development support, teachers will find it easier to design learning activities in an FC. The TPACK framework was used in the current study to make decisions about how to design learning activities in the FC, as well as to rationalise teachers' perceptions.

2.6 Teachers' Perceptions of FCs

Teachers have been shown to play a crucial role in the flipping process – to make decisions about teaching content, and to implement learning outcomes and goals (Koehler & Mishra, 2009; A. D. Mazur et al., 2015). Gough et al. (2017) found that the greatest benefits of the FC approach for teachers were (a) the opportunities it presented for absent and struggling students to re-watch the recorded lessons, (b) the increased interactions between students and teachers, and (c) the increased time for various learning activities. The teachers participating in Ansori and Nafi's (2018) study reacted positively to the FC because it helped active learning, developed cooperation, enhanced autonomous learning, and increased classroom collaboration.

Teachers may also face barriers when integrating technology into their courses. Senior teachers who are not proficient in technology use have been found struggling to apply flipped teaching (Rakes & Dunn, 2015). As well, remodelling lessons for an FC can be challenging and time consuming (Roehl et al., 2013). In order to adapt their teaching pedagogies, teachers have been reported to invest time on the acquisition of new technological and teaching skills and cope with additional workloads for preparing blended learning lessons (Benson et al., 2011; Riley et al., 2013). In the FC model, teachers need to provide help and guidance in a timely manner so that students remain motivated and engaged

during class and not feel isolated (Shyr & Chen, 2018).

Not every teacher is found to perceive the effectiveness of blended learning and willingly get involved in the required professional development (Betts, 2014). Research has indicated that teachers' beliefs have direct impact on their classroom practices (Burns, 1992) and determine their reactions to innovations in teaching writing (L. Shi & Cumming, 1995; Tsui, 2003). These studies suggest possible ways that teachers in this current study may react to FC.

Research into the use of blended learning (BL) in Vietnam, through semi-structured interviews with 30 EFL lecturers from 10 different universities, revealed eight groups of barriers and four groups of drawbacks to the successful application of BL (T. N. Le et al., 2021). The most significant barriers were lack of infrastructure and technology; lack of institutional policies and support; lack of knowledge, experience, and investment in using BL; lack of technological competence and information technology (IT) skills; and lack of teaching time to employ web-based technologies and online resources in classrooms. The most crucial drawbacks included lecturers' workloads, ineffective use of blended learning, time consumption, and demotivation.

Recent meta-analyses across various disciplines and educational contexts indicate a notable absence of teachers as subjects in FC research (Akçayır & Akçayır, 2018; Jiang et al., 2020; T. Long et al., 2020b). The current study takes into consideration teachers' perceptions of FC, along with their attitudinal changes during different stages of an FC intervention.

2.7 Research Questions

This study set out to fill the gap in empirical research of flipped instruction in EFL academic writing in Vietnam. Using classroom observation, pre- and post-questionnaires throughout the process, and focus-group interviews at the end of the course, the researcher obtained rich data concerning teachers' and students' attitudinal changes towards flipped learning. While recent L2 writing research suggests that an FC approach can improve student performance (P. Lee et al., 2019; W.-C. V. Wu et al., 2020; Zou & Xie, 2019), this study has investigated not only student writing outcomes but also their subskills (*task addressing; coherence and cohesion; lexical resource; grammatical range and accuracy*) through the analysis of four academic essays written by students. The researcher also embarked on two case studies in which students' learning experiences and achievements in an FC could be carefully examined and lead to further insights.

The study sought to answer the overarching research question:

> ***What are the effects of flipped learning on an EFL Academic Writing course in a Vietnamese higher education context?***

There were three subsidiary research questions:

(**1**) How do participating Vietnamese EFL students experience the flipped classroom?

(**2**) What are the effects of the flipped classroom on these students' achievements?

(**3**) What are the teachers' perceptions of implementing a flipped classroom approach?

This chapter has reviewed the existing literature related to the implementation of an FC approach in EFL Academic Writing. The process-genre writing approach focuses on fostering students' linguistic knowledge and teachers' scaffolding through stages of writing in online (preparation, modelling, planning) and in-class (planning, joint constructing, independent constructing, revising) sessions. The four pillars FC model has the potential to create a learner-centred classroom that promotes writing competence, learning experiences, and student interactions with teachers and peers. The use of recognised educational theories, including self-determination theory, self-regulation, social constructivism, and TPACK informed the methodology of this research into FC practices. Chapter 3, the methodology chapter, will outline how the data were collected and analysed in order to answer the research questions.

CHAPTER 3

Research Methodology

3.1 Introduction to the Chapter

This chapter explains and justifies the methodology employed for this project and indicates how evidence was gathered to answer the following research questions:

> ***What are the effects of flipped learning on an EFL Academic Writing course in a Vietnamese higher education context?***

(**1**) How do participating Vietnamese EFL students experience the flipped classroom?
(**2**) What are the effects of the flipped classroom on these students' achievements?
(**3**) What are the teachers' perceptions of implementing a flipped classroom approach?

Consistent with a mixed-methods approach to the data analysis, both quantitative and qualitative data were collected (Bogdan & Biklen, 1998; Merriam, 2009). The context of the study and rationale for selecting this approach will be discussed in the following sections.

3.2 The Context of the Study

The study was conducted at a public university in the southern region of Vietnam in early 2019. Combining its educational philosophy of humanity, innovation, and integration into modern teaching technologies, the university intends to implement massive open online courses (MOOCs), which are expected to provide an optimal and cost-effective boost to Vietnamese higher education (World Bank, 2020). The university's 15 faculties and institutes host a population of approximately 20,000 students. The admission success rate has been 20–30%, making this Vietnamese higher education organisation a highly selective institution.

This research focused on English-major students of the 2018 intake when they were in their second semester of their first year. Due to the omission of grammar courses, writing courses now tend to integrate grammar practice, with students required to write essays in this semester. Prior to that, it was not until the third writing course in the second year that essay writing was taught, by which time

students had completed two grammar courses.

In Semester 1, Basic Writing, the prerequisite course of Academic Writing, focuses on writing good sentences and different types of paragraphs. With regard to good sentence writing, students are given practice in sentence structures, grammar issues, and punctuation. These are related to sentence skills in order to help students avoid common sentence problems and build sentences in a logical and grammatically correct manner. In terms of paragraph writing, each unit enables students to fully understand the organisation of a complete paragraph, which consists of a topic sentence, supporting sentences, and a concluding sentence. In addition, students are guided through a sequence of steps that helps them learn how to write a well-structured paragraph as well as different types of paragraphs, for a range of audiences and purposes.

The study was conducted during the Academic Writing course in Semester 2 in February, 2019. This course helps build a bridge from paragraph writing to essay writing. Students learn how to develop their ideas into a well-structured essay with three sections, namely introduction, body and conclusion. According to the course outline, the first 4 weeks of the course are dedicated to a review of paragraphs, and the five elements of good writing: purpose, audience, clarity, unity, and coherence. The rest of the course focuses on four types of academic essays: description, comparison, cause-effect, and classification.

3.3 Mixed-Methods Approach

Over the past 50 years, social and behavioural research has undergone three methodological movements: **(1)** the quantitative movement, **(2)** the qualitative movement, and **(3)** the mixed methods movement (Teddlie & Tashakkori, 2003). As the third paradigm, mixed methods research is defined as "research that involves collecting, analysing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon" (Leech & Onwuegbuzie, 2008, p. 267). As recognised by mixed methods research, both quantitative and qualitative research are important to examine the research objectives (R. B. Johnson & Onwuegbuzie, 2004). With statistical analyses, quantitative research has the power of prediction and generalisation, while qualitative analyses produce expressive data that help understand the underlying layers of a social phenomenon.

To investigate the intricacies of a learning environment, researchers often employ multiple methods (Fraser, 1998). It has been noted that the mixed methods approach has been the most commonly used research method in FC studies (Birgili et al., 2021; Turan & Akdag-Cimen, 2019). Afrilyasanti et al. (2016) investigated the effect of an FC approach on the writing ability of 30 EFL Indonesian students. To measure the four writing dimensions (i.e., content, organisation, language use, and dictions), a pre-test and post-test were administered to provide quantitative data, and the students' writing was analysed as qualitative data so that each could inform the other. A study by Hsieh et al. (2017) with a total of

48 Taiwanese participants employed pre- and post-tests on idioms, two questionnaires, the teachers' in-class observations, and semi-structured focus-group interviews. Such mixed methods research design provided a comprehensive sense of the participants' learning outcomes and their perceptions of learning experiences. G. Lee and Wallace (2018) gathered data from 79 South Korean students' achievements in three major tasks, their responses to three surveys, and the instructor's notes on the students' engagement in the process of their English learning. Using mixed methods this way can take advantage of all the data collection tools, thus combine the strengths of quantitative and qualitative approaches (Ary et al., 2019; Creswell & Plano Clark, 2011).

In order to develop a deep understanding of the practicality of the flipped classroom (FC), it is vital to study the practice in action using quantitative and qualitative data sources (Fraenkel, 2006; Reeves et al., 2013). The quantitative component will measure the effects of the FC on student attitudes and achievements while the qualitative component enables understanding of how participants experienced flipped learning. Therefore, the mixed methods approach allowed complementarity when a single data set was unable to respond to the research questions with confidence and reveal different layers of a phenomenon (Creswell, 2014; Feilzer, 2010; Onwuegbuzie & Combs, 2011).

Some researchers claim that associations can be explored using quantitative data, but to uncover cause and effect, a complex research design using qualitative approaches is needed (Gilbert, 2009). By choosing mixed methods, the limitations of a quantitative approach (in this case, the small sample size) could be offset by qualitative methods that can provide a rich and thick description (Creswell & Plano Clark, 2011; Guba & Lincoln, 1994). Such rich and thick descriptions also allow readers to consider the transferability of the findings of the study to other cases or settings (Creswell & Poth, 2018).

For research question 1 (RQ1), student attitudes to academic writing (AW) and their perceptions of the FC were collected through questionnaires. These questionnaires produced quantitative data, with scope for students to provide qualitative answers to open-ended questions. One pre-questionnaire was conducted before the study, and two post-questionnaires after each phase of interventions to record students' attitudinal changes. To further explore individuals' attitudes and better understand their situations, qualitative data were collected through classroom observations and focus group interviews with four to five students per class (Creswell, 2009; Feilzer, 2010; Gray, 2009; Yin, 2014). The quantitative component of this study also involved four writing tests to track 32 English major students' achievements and progress over a semester, thus addressing RQ2. In response to RQ3, semi-structured interviews with the two teachers documented these implementers' experiences in each of their classes.

For the analysis, the quantitative and qualitative findings were brought together to produce a comprehensive, multi-faceted description of students' and teachers' attitudes as well as students' learning

outcomes in an FC. For the interpretation of the data, the data sets of the two classes were compared for any different effects during the interventions. These will serve as pieces of a jigsaw puzzle to provide a more thorough picture of the FC implementation in the Vietnamese context.

3.4 Case Study Design

According to Baxter and Jack (2008), case study enables the researcher to closely examine a phenomenon within a specific context. In order to gain a better understanding of how and why students behaved in particular ways, a mixed methods case study design that included both quantitative and qualitative data was adopted. Case study methodology provides the opportunity for in-depth investigation of students' learning experiences, which "allows for multiple facets of the phenomenon to be revealed and understood" (Baxter & Jack, 2008, p. 544); however, its main disadvantage is generalisability (Tellis, 1997; Woodside, 2010; Yin, 2014).

The use of multiple data sources can raise the level of confidence in the robustness of a research project and add to the richness of its findings (Rowley, 2002; Yin, 2012). Rather than a single case study, in this research, two cases (each of a university class) were investigated (in-case analysis) and compared (cross-case analysis) (Yin, 2014). The two cases illustrated two different experiences of FCs. Such multiple-case design allowed for the prediction of similar results in the first stage, when both classes followed a flipped approach, and of contrasting results in the second stage, when one class shifted to a traditional approach (Baxter & Jack, 2008; Yin, 2014).

For the within-case analysis, each class and particular groups of students (based on academic and use-frequency profiles) were studied closely to determine the consistency of the findings (Yin, 2014). Prior research has paid little attention to such individual levels, focusing more on the overall outcome than the learning process (Jiang et al., 2020). The focus on particular students yielded insights into possible relationships between their online engagement and achievement. Cross-case analysis involved the in-depth exploration of similarities and differences across classes under the interventions to reach valid conclusions about the impacts of FCs.

As the first 3 weeks of the semester focused on the revision of paragraph writing, the study took place from Week 4 to Week 14 (three 50-minute periods per week) when instruction in academic essays was given (see Table 3.1). Both classes centred on four types of essays: description, comparison, cause-effect, and classification.

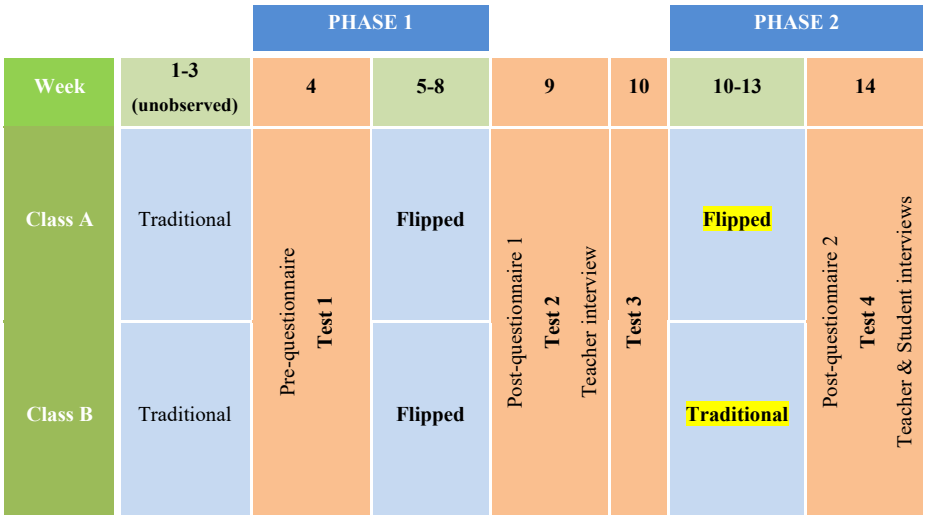
The length of the data collection period was a significant consideration. In He et al.'s 2016 study within 10 weeks, flipped instruction did not promote student motivation or perceived quality of in-class activities. About one fifth of their experimental group's students did not prefer flipped instruction over traditional lectures. While the overall effect of the intervention was more pronounced in the beginning,

it diminished over time due to the students' non-compliance with pre-class study. Furthermore, a novelty effect can result in a short-term boost to student performance when a new approach and/or technology is implemented (K. R. Clark, 2015). As students usually have an adaptation period of about 3 weeks (Hotle & Garrow, 2016; Mason et al., 2013), the effects of an FC intervention should be monitored over a longer period of time.

In addition, several studies have reported that an FC had more positive effects on students' perceptions and learning outcomes compared to a traditional classroom as a control group (Burak & Tugba, 2018; Tsai, 2019; Webb & Doman, 2020). However, to the best of the researcher's knowledge, little if any research has been undertaken to examine students' attitudes and performances when switching from flipped to traditional models.

To bridge these research gaps in this study, different proportions of flipped instruction were applied to the two classes. Class A was given a flipped instructional model for the whole 10 weeks, while Class B experienced flipped learning for the first segment (Weeks 4–8), followed by a traditional model (Weeks 10–14). Table 3.1 shows the timeline of the implementation of teaching models and research instruments throughout the study.

Table 3.1.
Research Timeline and Instruments



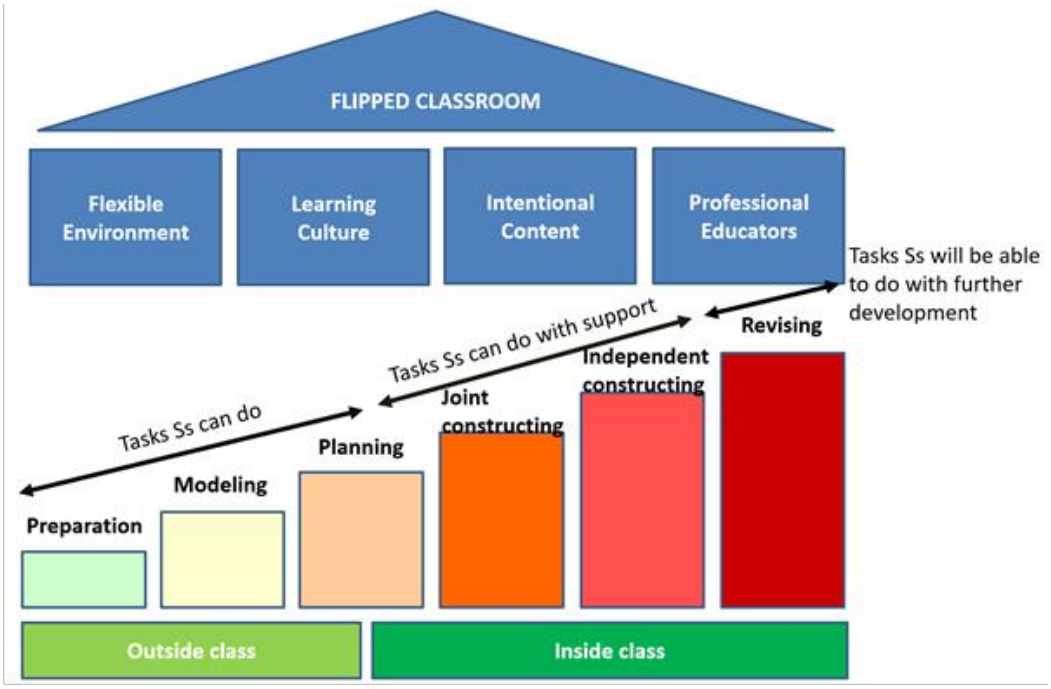
3.5 Theoretical Framework for the Study

The theoretical framework for this study was constructed based on self-determination theory, social constructivism and four pillars of flipped learning. According to self-determination theory, the learning environment that meets students' psychological needs for competence, autonomy and relatedness can have an impact on their motivation and learning outcomes (Deci & Ryan, 2000). The opportunity for interaction with the teacher and peers is important to satisfy the need for relatedness, while feedback has an effect on competence and autonomy.

Flipped instructions reflect students' cognitive stages and correlate with Bloom's revised taxonomy (Anderson & Krathwohl, 2001). Pre-class work in the flipped writing classroom focuses on lower levels of thinking (preparation, modelling, planning); the more complex tasks (joint constructing, independent constructing, revising) are reserved for class time, with the teacher's and peers' support. By encapsulating such underlying learning theory as social constructivism, FC has the potential to help low performers overcome the writing challenges through scaffolding and giving timely feedback (Su Ping et al., 2020).

The incorporation of four pillars of flipped learning (*flexible environment, learning culture, intentional content* and *professional educators*) can create active, engaging and student-centred classrooms that optimise students' learning capacity (Hamdan et al., 2013). Figure 3.1 shows the theoretical framework for the study.

Figure 3.1.
Theoretical Framework for the Study



Social constructivism suggests converting educator's role to facilitator that guides students' learning process. To explore teachers' perceptions in the integration of technology in a flipped writing classroom, the Technological Pedagogical Content Knowledge (TPACK) framework (Koehler & Mishra, 2009) was applied. The employment of TPACK framework helps illuminate how the use of technology in the FC was influenced by teachers' pedagogical beliefs and barriers faced.

As mentioned in Chapter 2, positive effects of using FC approach have been found in students' learning attitudes, satisfaction and achievement (e.g., Hsieh et al., 2017; Hung, 2015; Zou et al., 2020). Although the above-mentioned theories have been widely applied in educational research, the main aim

of their application in the current study was to investigate changes in teachers' and students' attitudes and students' writing performances under FC interventions. Therefore, the mixed methods case study design that framed the research permitted an in-depth investigation of the phenomena across all-flipped and flipped-and-traditional models. The results from both cases were then brought together to generate a holistic view, considering the similarities and differences in the findings.

3.6 Participants

As there was a notable absence of teachers as research subjects in previous FC studies (Akçayır & Akçayır, 2018; Jiang et al., 2020; T. Long et al., 2020b), this study sought to reveal both teachers' and students' experiences and perspectives on the flipped approach through the two phases.

3.6.1 The Teachers

Obtaining teachers' perspectives was important because of the direct connection they had with the FC implementation. Choosing the two teacher participants was based on purposeful sampling. The benefits of this sampling technique lie in the participants' availability and willingness to participate, and their capability to communicate experiences and opinions in an expressive manner (Bernard, 2002; Patton, 2002). Having teachers of different ages and experience provided "information-rich cases for study in depth" (Patton, 2002, p. 230).

In order to establish some consistency in regard to the FC learning activities, the researcher assisted the teachers in the design of online and in-class materials. As suggested by Day and Foley (2006), the two classes had as many matched factors as possible; for example, they covered the same topics, used the same slides and activities both online and in class, and had the same writing tests. While such assistance might have influenced the findings to some extent, this approach allowed for a valid comparison of the FC effectiveness between the two classes. The research goal was to shed light on teachers' pedagogical beliefs concerning flipped instruction, regardless of their technological competence.

As in Vietnam, teachers are addressed using Co (female) or Thay (male) and first name without denoting qualifications, the two teachers in this study are referred to as Co/Thay, together with pseudonyms:

- Co Huong was in her late thirties. She has a Master of Arts in TESOL, and had 16 years' teaching experience (with 10 years teaching Writing to undergraduates). She had attended some workshops on blended and flipped learning and knew how to use some online software to create games and quizzes.
- Thay Tuan was in his sixties and a senior lecturer. He has a PhD in Education, and nearly had 40 years' experience in tertiary teaching. He reported having only basic information communication technology (ICT) skills, but he could effectively search for teaching materials.

3.6.2 The Students

A convenience sampling method that involved using an accessible sample was chosen (L. Cohen et al., 2011). This is the most common type of sampling in second language (L2) research and is usually employed when the characteristics of the participants suit the purpose of the study (Dörnyei, 2007; Gall et al., 1996). Thirty-two students (aged 18 to 21) who had enrolled in the two classes taught by the teacher participants were recruited for the study. They were in their first year of the 2018 intake and had completed the Basic Writing course (A2+ to B1 in the Common European Framework of Reference (CEFR)) in Semester 1, and registered for the Academic Writing course in Semester 2.

- Class A: 21 students (15 females and 6 males) taught by Co Huong.
- Class B: 11 students (8 females and 3 males) taught by Thay Tuan.

3.6.2.1 Academic Profiles: Low and High Performers. While some studies indicate that flipped instruction benefits students uniformly regardless of prior academic profile (He, 2016), others suggest its potential to bridge the achievement gaps (S.-C. Yang et al., 2019). In order to gain deeper insights into the influence of FCs in regard to student achievement profiles, the attitudes and writing achievements of lower and higher performing students across phases were examined. The students' scores on the first writing test (i.e., placement test) were used to create two groups based on the score median: low performers with performances below the 50th percentile and high performers with performances above the 50th percentile. It was acknowledged that some students were close to the cutoff points of low and high achievement. Such division into two groups made it easier to compare the two ends of the classes and minimised the interference from the grouping variable. This meant the distinction between the two groups (if any) was more likely due to factors other than grouping.

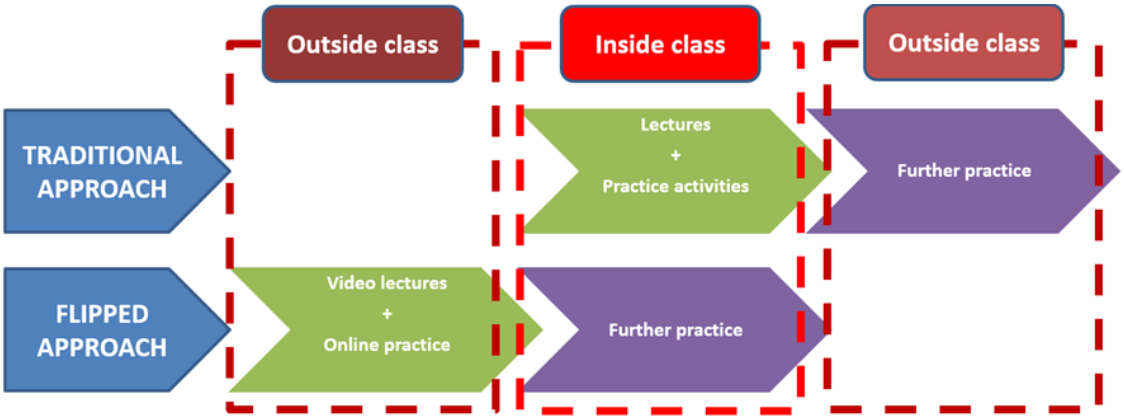
3.6.2.2 Use-Frequency Profiles: Consistent, Partial Users and Non-Users. Student engagement in an e-learning environment has an impact on their learning performance and satisfaction (Chou & Liu, 2005). While the measurement of the affective and cognitive engagements is challenging (Maskell & Collins, 2017), behavioral engagement is easier to observe and measure, especially with the help of learning management systems (Reschly et al., 2020). Learning analytics data revealed various patterns of students' online behaviours based on their frequency of interaction with online materials. There emerged three focus groups: consistent users, partial users and non-users of online learning resources. For each focus group, two students (one male and one female) were selected so that there was one low performer and one high performer. These stratified groups will "illustrate characteristics of particular subgroups in order to facilitate comparison" (Patton, 2002, p. 244).

3.7 Learning Activities

Previous research has put an emphasis on the importance of sustaining students' engagement for improved academic outcomes (Hockings et al., 2008; Michael, 2006). Traditionally, lectures take

place inside the classroom, and most of students' practice is done at home. The blended learning approach of FCs reverses this traditional process, allowing students to come to class ready for practice. Figure 3.2 (adapted from T. Long et al. (2016)) shows how activities are conducted in traditional and flipped approaches.

Figure 3.2.
Traditional vs. Flipped Approaches



In this study, the FC instruction was designed based on four pillars (Flipped Learning Network, 2014; Hamdan et al., 2013):

(**1**) *Flexible learning environment* in which learning opportunities exist both inside and beyond the classroom via Moodle (an open-source learning management system)

(**2**) A shift in *learning culture* from a teacher-fronted classroom to a student-centred approach

(**3**) *An intentional design of content* with video lectures, online tasks and resources, as well as face-to-face active learning activities

(**4**) *Professional educators* who design activities, monitor students' learning progress, and provide feedback

Furthermore, the FC instructors needed to deal with the presentation order of the course materials: what would be presented prior to class and what would be addressed during class. McCarthy (2016) has pointed out that decisions about what to move online should be led by pedagogy rather than by technology. Taking a pedagogical view using Bloom's revised taxonomy (Anderson & Krathwohl, 2001) (Anderson & Krathwohl, 2001), Table 3.2 compares the traditional and flipped methods of classroom teaching. In the learning activities designed for the flipped classroom, pre-class activities aim at the lower levels of cognitive work (e.g., remembering and comprehension), and in-class activities facilitate the higher levels (e.g., analysis and evaluation). By contrast, the traditional method of teaching focuses on the lower levels of Bloom's taxonomy in the classroom, with students working independently on the higher level skills during their homework (Sharma, 2018).

Table 3.2.
Bloom's Taxonomy for Traditional Classroom and Flipped Classroom Approaches

Levels of Bloom's taxonomy	Traditional classroom tools	Flipped classroom tools
Remembering	Face-to-face lectures	Video lectures, online tasks
Understanding	Question and answer	Embedded questions, online discussion
Applying	In-class practice	Online + in-class practice, collaboration
Analysing	Homework: individual work	In-class discussion
Evaluating	Homework: peer feedback	Peer feedback (in class + online)
Creating	Homework: essays	Presentations, projects, essays

(Adapted from Kiang and Yunus (2021))

The FC approach carries with it the risk of cramming content into an online learning environment, which may result in information overload for students (G. B. Johnson, 2013; Wagner et al., 2013). Therefore, in this study the amount of FC homework was taken into careful consideration so that it did not exceed the allocation of the participating students' self-study time. According to the course outline, in addition to 150 minutes of weekly in-class session time, students are expected to spend double that amount of time (i.e., 300 minutes, or 5 hours) on further practice in order to achieve the learning outcomes.

As shown in Table 3.3, the FC for Class A had two components – online and face-to-face (Bishop & Verleger, 2013). Class B shared the same teaching content in Phase 1, but differed when it switched to a traditional model in Phase 2. The same coursebook 'Great writing 3: From great paragraphs to great essays' (Folse et al., 2015) was administered in both flipped and traditional models to make the writing instruction for the two classes parallel.

Table 3.3.
A Summary of Learning Activities

Learning activities		Class A		Class B	
		Phase 1 (Flipped)	**Phase 2 (Flipped)**	**Phase 1 (Flipped)**	**Phase 2 (Traditional)**
Online component	**Teacher-produced input material**	3 videos (3-8 minutes each) Handouts	1 video (5 minutes) Handouts	Same as Class A's Phase 1	N/A
	Teacher-produced interactive material	5 activities on Moodle: label, drag and drop, multiple choice	3 activities on Moodle: drag and drop, multiple choice		N/A
	Web-sourced input	2 videos (2 minutes each)	2 videos (4-9 minutes each) Coursera		Handouts
	Web-sourced interactive material	Padlet and Google Docs for brainstorming Khan Academy for Grammar practice	Padlet for brainstorming Google Docs for peer editing Quizzes		N/A
Face-to-face component	**Face-to-face input**	Advertisement video to facilitate presentations Sample essays	Handouts Sample essays		Coursebook
	Face-to-face interactive material	Writing checklist Peer editing sheet	Kahoot quiz Worksheet		Worksheet

The following descriptions of online and face-to-face activities will illuminate how the design of learning activities was linked to the context of the flipped English classroom studies.

3.7.1 Online Activities

A detailed account of how to create lecture videos and develop instructional materials can serve as a guide for instructors seeking to implement an FC approach in their language classrooms.

3.7.1.1 Learning Management System (LMS) – Moodle. Moodle was used as a learning platform in the flipped approach for students to gain access to video lectures and other online activities (see Figures 3.3 and 3.4). In comparison with other commercial LMSs, Moodle is quite user friendly and well-structured for supporting active and interactive learning (Goyal & Tambe, 2015). In Moodle, students can view videos, download materials, take quizzes, submit assignments, post comments on forum discussion boards, and work collaboratively on group projects. Utilising Moodle this way can facilitate the students' lower- and higher-order thinking skills (Shaykina, 2015).

At the beginning of the semester, both teachers registered for Moodle versions to be created for their classes, and had students enrolled by the university's Digital Learning Center. Since 2016, the university has encouraged teachers to use Moodle in teaching. In an attempt to optimise blended

learning, the school policy stated that the use of Moodle and video lectures could help reduce the number of in-class sessions and of up to 100 periods could be transferred to teachers' research time.

In Week 3, the students were informed about the application of Moodle, and one Edpuzzle video (`https://edpuzzle.com/`) was uploaded so that the students would have sufficient time to become acquainted with the new technological use. According to Hubbard (2013), for students to adapt to new technology-enhanced language learning environments, initial scaffolding is of great importance. The students also took part in an orientation session in Week 4, which explained the purpose of the FC approach and gave instructions on the effective use of lecture videos and online materials.

The videos were always accessible on Moodle, so the students could play, replay, and pause to take notes and answer the embedded questions using computers, tablets, and smartphones. Videos and online activities for the next lesson were posted on Moodle one week before an in-class session. The lesson objectives and activities checklist were included in each module for students to keep track of their progress. The videos were often supported by handouts and online practice. Providing these pre-class materials one week in advance allowed the students to pace their self-directed learning of the subject along with other commitments (E. Han & Klein, 2019).

With FCs it is important for the teacher to know not only how class time is spent, but also what and how students learn outside of class. Using the quizzes created on Moodle such as multiple choice, matching, filling in the blank, and true-false, the teachers and researcher could track students' attempts and the amount of time they spent on those activities.

Figure 3.3.
A Screenshot of a Moodle Session

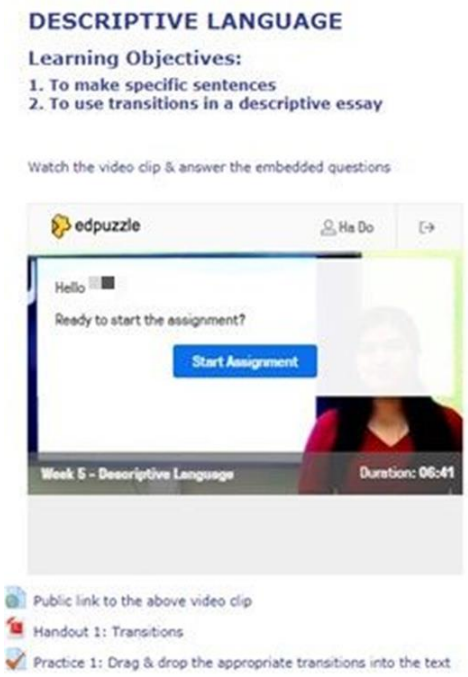
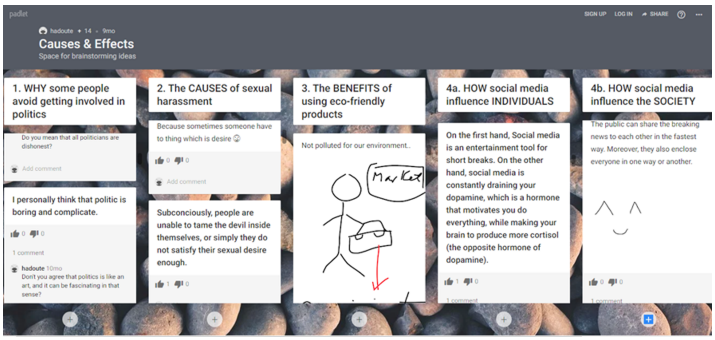


Figure 3.4.
A Multiple-Choice Activity on Moodle

Other online activities included brainstorming ideas using Padlet (`https://padlet.com/`) (see Figure 3.5), peer editing using Google Docs (see Figure 3.6), as well as links to other learning resources for students' practice of grammar and vocabulary (see Figure 3.7).

Padlet is an online platform where students can post texts, pictures, web links and videos, which are autosaved and immediately updated. Figure 3.5 shows how teachers could utilise Padlet for students to post their ideas based on the assigned topics. In addition, under public view, they could vote on the notes (through the use of a "thumbs up" icon, a "like" icon, or a "star" icon) as well as make comments and sketches. Padlet has been shown to promote engagement, especially for reserved students who prefer to contribute their ideas textually (Baida, 2014; Fisher, 2017).

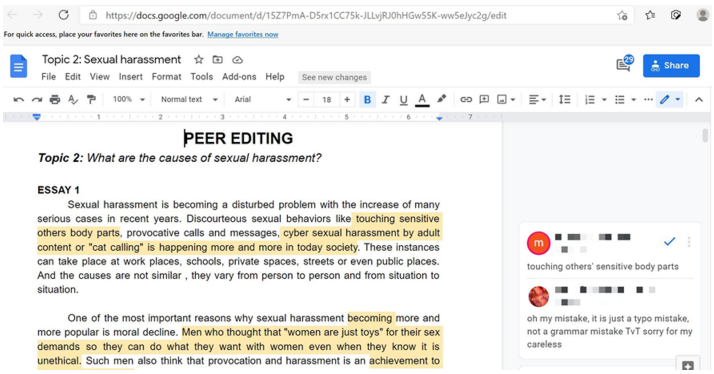
Figure 3.5.
A Padlet Activity for Brainstorming Ideas



While feedback is of great importance for writing improvement, teachers might not have time to provide detailed comments on all students' work. To reduce teacher workload and encourage collaborative learning, Google Docs was selected as the platform for online peer feedback (Ebadi & Rahimi, 2017) (see Figure 3.6). Because it allows multiple editing in real time, the students could easily view, edit, and comment on texts and paragraphs using their phones, tablets, or laptops. In addition to having the features commonly available in word processors, Google Docs enables collaborators to reply, accept or reject the changes, which not only provides an online interactive environment but also develops

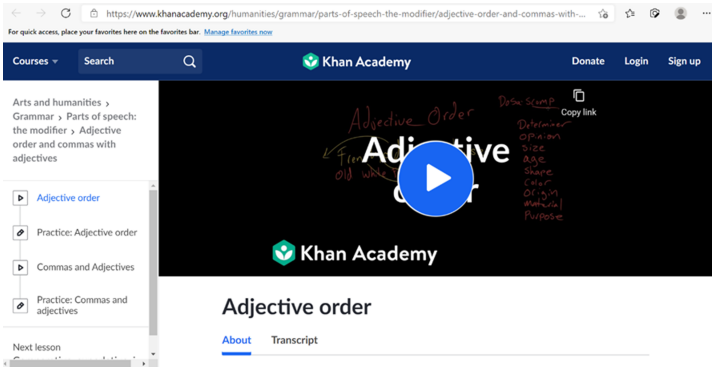
higher-order thinking skills such as analysis and evaluation (Godwin-Jones, 2008).

Figure 3.6.
Peer Editing on Google Docs



As there was no class time for explicit grammar instruction, teachers posted some related educational videos from YouTube or Khan Academy for students to practise in their own time (see Figure 3.7).

Figure 3.7.
A Grammar Lesson on Khan Academy

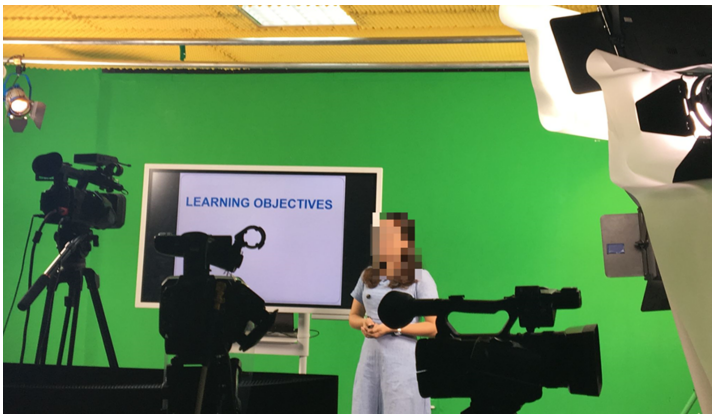


3.7.1.2 Video lectures – Edpuzzle. While creating one's own lecture videos is time-consuming (Enfield, 2013), teachers can take advantage of ready-made videos that align with the learning outcomes (Sams & Bergmann, 2013). Four out of the eight video clips in this study were made by the teachers in charge of the Academic Writing course, and the others were taken from varied sources (free from copyright restrictions). According to Fulton (2012), some students prefer their own teacher's lesson videos, and some may be keen on viewing media from other resources.

The first two self-made videos were filmed in a digital learning room, but some students complained about their low volume. Therefore, the other two videos were later shot in a studio to minimise background noise and distracting sounds, and then underwent extensive editing for special effects. Figure 3.8 below shows how the studio was set up for filming.

The teachers tended to use high frequency words in self-made video lectures and also in handouts. In case of ready-made videos, subtitles were available to assist L2 listening (Winke et al., 2010).

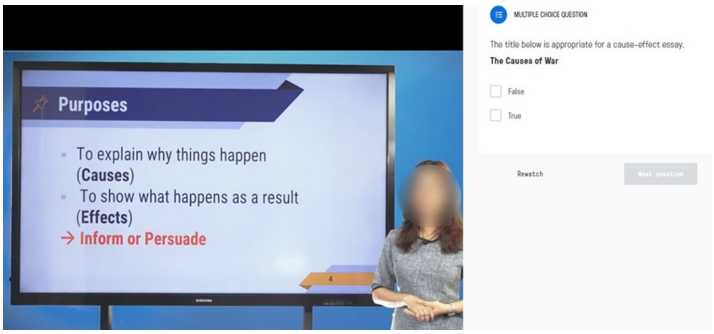
Figure 3.8.
Video Filming in Studio



Research suggests that 95–98% lexical familiarity is needed for acceptable comprehension (Laufer & Ravenhorst-Kalovski, 2010; van Zeeland & Schmitt, 2012).

The video length was decided in light of research showing that "the novelty of any stimulus tends to wear off after about 10 minutes, and as a result, learners tend to check out after 10 minutes of exposure to new content" (Goodwin & Miller, 2013, p. 79). Half of the videos used in this course did not exceed 5 minutes, with the longest being 9 minutes 13 seconds. The videos were set as "Prevent Skipping" to ensure students would not skip sections. Smallhorn (2017) raised the concern that students might let the video run without actually watching it. The videos, therefore, were divided into segments with questions popping up on the screen; students could not continue watching until they had answered the embedded questions (see Figure 3.9). Multiple-choice questions were graded automatically, while open-ended questions were marked by the teachers.

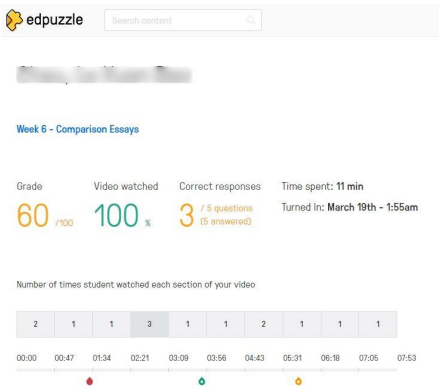
Figure 3.9.
An Embedded Question in a Video



Edpuzzle is a free assessment-centred tool that allows teachers to create interactive online videos and provide immediate feedback. All the videos were uploaded on `Edpuzzle.com` with embedded questions that allowed the teachers to check the participating students' understanding and monitor their asynchronous learning progress (Bush, 2013; Slomanson, 2014; Zappe et al., 2009; Zou & Xie, 2019).

The students viewed the videos on the Moodle website after logging in to Edpuzzle via their university email account so that their progress and grades could be recorded. The teachers would post a public link to each video after the in-class session for those who failed to log in. Students could also access Edpuzzle videos from any browser or through iOS or Android apps. The use of Edpuzzle thus provided the teachers and researcher with a detailed report on the students' grades, the time they spent viewing each section, and the date of submission (see Figure 3.10). Based on such data, the teachers could ascertain what students found difficult to understand, and when more explanations might be necessary.

Figure 3.10.
A Snapshot of Edpuzzle Report



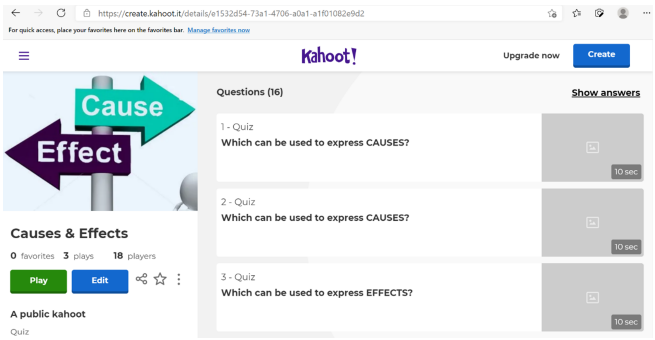
3.7.2 Face-to-Face Activities

For the success of the FC approach, it is important to rigorously structure classroom and online activities so that these two components have a complementary relationship (Bush, 2013; M. K. Kim et al., 2014; Mason et al., 2013; Strayer, 2012; Zappe et al., 2009). At the beginning of each class, the teachers incorporated a question-and-answer session or a verification quiz in order to revise and build connections with the online content (Engin & Donanci, 2014; Roehl et al., 2013; Talbert, 2012). Repeating content from the pre-class materials was avoided, otherwise students might be less motivated to do their home learning (E. Han & Klein, 2019).

To enhance student engagement through formative assessment, Kahoot, a game-based learning platform, was used at the beginning of the class to check the students' comprehension by allowing entry into a polling window in their Internet-connected devices (Johns, 2015) (see Figure 3.11). Despite its focus on lower levels of cognitive work, Kahoot can be a useful tool for knowledge retention, enhanced motivation and classroom engagement (Guardia et al., 2019; Tao & Zou, 2021).

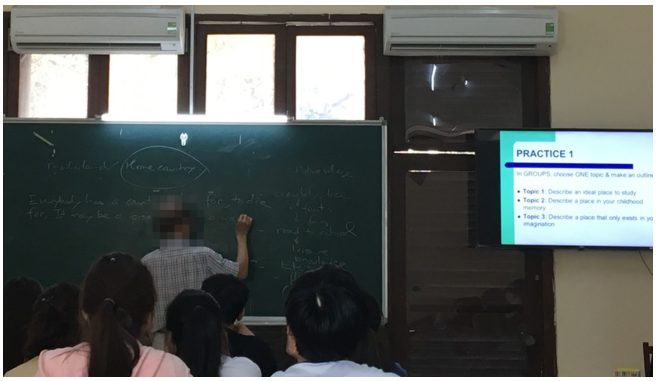
In class, the students were involved in a variety of higher order activities such as discussions, presentations, problem-solving, and peer editing (see Appendix A.1 for weekly schedules of online and face-to-face sessions). Students could work in pairs or small groups to produce a writing assignment, benefit from peer instruction (Fernández, 2012; Shehadeh, 2011), and give each other feedback on

Figure 3.11.
A Kahoot Activity



individual writing. Learning this way can create a more interactive and engaging learning environment for students as they discuss with their peers, and pose questions to teachers directly (Ogden, 2015; Smallhorn, 2017). Teachers also had time for face-to-face interactions with students and to give feedback on their previous writing, or on writing produced in class.

Figure 3.12.
Teacher's Using Chalkboard to Give Examples



The tasks tended to be authentic and intrinsically rewarding so that learners applied what they learned in the online session, as suggested by Mason et al. (2013). For instance, in Week 6, when learning about place description, the students used the vocabulary they had brainstormed on Padlet to collaboratively create a piece of advertising for the best summer holiday destination. Another example is the Week 8 practice of comparison language in which they worked out which laptop model was the best purchase. These activities were designed to correspond to the English-major students' anticipated career fields such as education, communication, business, and hospitality.

3.8 Research Instruments

In this section, the design and management of the data collection tools used in this study will be described and justified. The instruments shown below are arranged in reference to the research questions.

3.8.1 Questionnaires

In response to RQ1, questionnaires were used to interpret students' attitudes and expectations in learning EFL Academic Writing. To evaluate whether there were any changes in students' attitudes after each phase of the intervention, one pre- and two post-questionnaires were disseminated in Weeks 4, 9 and 14, respectively. Asking the same questions at different points in time allowed reporting on students' attitudinal changes over time. Table 3.4 provides an overview of how the question items were organised based on their functions (see Appendix A.3 for the full list of question items).

Table 3.4.
An Overview of Question Items

Questionnaire content	Function	Sample prompt
Items 1 – 6 (Pre-questionnaire)	Background information	*Age:* ☐ *18-21* ☐ *22-25* ☐ *26-30* ☐ *Over 30*
Items 1 – 5 (Post-questionnaire)	Student home study	*How many hours do you spend studying before each week's class?*
Student Attitudes towards English Academic Writing (EAW)		
Items 1 - 4	Motivation in EAW	*I enjoy writing academic essays.*
Items 5 - 8	Engagement in EAW	*I always finish my writing homework before class.*
Items 9 - 16	Effectiveness in EAW	*My writing has improved with time.*
Student Perceptions of Learning Experiences		
Items 1 - 10	Learning experiences	*Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom.*
Items 1 - 5	Open-ended questions	*What do you think are the most satisfying aspect(s) of this learning experience?*

3.8.1.1 Design Considerations. Questionnaire design requires detailed attention. In this study, the length of the questionnaire was kept to a minimum to reduce the potential for response bias caused by fatigue (Hinkin et al., 1997). The section on students' attitudes towards Academic Writing was a modified version of questionnaires developed by Payne (2012) and Subramaniam and Muniandy (2019). The modifications included:

- The word "writing" in the Academic Writing Motivation Questionnaire (Payne, 2012) was changed into "English Academic Writing" to add clarity for respondents.
- The question items were reduced, and grouped clearly under headings: Motivation, Engagement and Perceived Effectiveness (Kelley et al., 2003; Rowley, 2014).
- Four items about student engagement adapted from Subramaniam and Muniandy's (2019)

Learning Engagement Scale Questionnaire were added.

The questions related to students' perceptions of their learning experiences were adapted from Ahmed (2016) and Hsieh et al. (2017):

- Questions about students' preferences of learning activities were added (Ahmed, 2016) (e.g., "I prefer traditional lectures in class to video lessons at home" in Item 6).
- In order to avoid including two questions in one item (Rowley, 2014) and make the constructs clearer, some items were modified as follows:
  - Original items: (Hsieh et al., 2017)
    - I think the flipped classroom is a more **effective** and **efficient** way to learn.
    - I **participated** and **engaged** myself more in learning in the flipped classroom.
  - Modified items:
    - Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom (Item 1).
    - I participate more in the flipped classroom activities than in traditional classrooms (Item 3).

The questionnaires were adapted from existing questionnaires to ensure reliability and validity with the intended population (Artino Jr. et al., 2014; Thayer-Hart et al., 2010) and to compare with other studies. Not only does using an existing, well-designed questionnaire save time and resources, researchers can also be more confident about the tested items as good indicators of concepts.

To increase the response rate, closed questions were mostly used (Rowley, 2014). In addition, alternating item wording served to minimise extreme response bias (all high or all low ratings) and acquiescent bias (agreement with all statements) (Baumgartner & Steenkamp, 2001; Nunnally, 1978). Below are two examples of prompts given as negative attributes to test student response bias (see Appendix A.15):

- I feel I am more in charge of my learning in a TRADITIONAL classroom (Item 2).
- I feel the flipped instruction DOES NOT help my learning (Item 7).

Students were asked to provide answers by circling one number in the Likert scale (**1** = I strongly disagree; **2** = I disagree; **3** = Undecided; **4** = I agree; **5** = I strongly agree). A scale with midpoints (i.e., **3** = Undecided) is appropriate for educational research because such an inclusion avoids forcing respondents to choose a direction (K. K. Tsang, 2012). Likert-type response scales are by far the most popular way of collecting survey responses because of their ease of response and analysis, and adaptability for measuring different constructs (McCoach et al., 2013).

3.8.1.2 Construct Considerations. Prior to the flipped instruction, the students completed a pre-questionnaire. Since the accessibility of online materials play a pivotal role in learning engagement,

the students' technology availability and digital capability were examined before implementing the FC (Akçayır & Akçayır, 2018). The first section of this questionnaire (see Appendix A.11) gathered demographic information such as age, gender, study major, as well as information concerning their previous e-learning experiences and digital devices (especially with regard to the time they would spend on their work and recreational activities). The demographic data collected for descriptive purposes did not directly address the research questions, but it did provide profiles of the participants in each research group.

Studies have identified a link between students' attitudes and learning outcomes: positive attitudes to learning can shape behavioural intentions and lead to learning persistence (Falout, Elwood, & Hood, 2009; Ushida, 2005). The second section of the pre-survey (see Appendix A.11-A.12) therefore focused on the students' attitudes (i.e., motivation, engagement and perceived effectiveness) towards English Academic Writing (16 items).

Motivation

Students' levels of motivation influence the amount of effort they devote to a given learning activity and therefore affect their performance (Payne, 2012; Sugita & Takeuchi, 2010). Motivation is also assumed to determine the success of a flipped class where students are required to undertake substantial out-of-class work (Abeysekera & Dawson, 2015). Studies have shown two types of student orientations in higher education: learning-oriented and grade-oriented (Alexitch, 1996). Students who learn for the satisfaction of knowing tend to be more engaged in learning activities and achieve more success than externally (instrumentally) motivated ones (Gardner, 1988). Thus, enjoyment, self-efficacy, and instrumentality have been shown to affect motivation.

- *Enjoyment* is an aspect of intrinsic motivation, which R. M. Ryan and Deci (2000) define as "doing something because it is inherently interesting or enjoyable" (p. 55) (e.g., "I like to write even if my writing will not be graded" in Item 3).
- *Self-efficacy* refers to students' confidence in their writing ability, a significant predictor of their achievement (Coutinho, 2008) (e.g., "I think I do pretty well in writing, compared to my classmates" in Item 4).
- *Instrumentality* is the motivation to learn for functional and practical reasons (e.g., "I believe writing could be of some value to me" in Item 2).

Engagement

As students' engagement is a strong predictor of their learning, achievement, and academic progress (Jang, Kim, & Reeve, 2012; Soffer & Cohen, 2019), it was an appropriate focus for this study. Three types of engagement were explored:

- *Behavioral engagement* comprises observable behaviors that demonstrate the student's engagement in learning (e.g., "During writing class, I ask questions to help me learn" in Item 6).
- *Affective engagement* is the expression of the student's emotions during learning (e.g., "I feel excited about the things I learn in writing class" in Item 7).
- *Cognitive engagement* includes the mental energy and strategies used to make cognitive connections (e.g., "I often look for ways to improve my writing" in Item 8).

Perceived Effectiveness

Perceived effectiveness has been found to have a positive impact on students' continuance intention to take flipped learning courses (Arpaci & Basol, 2020; Mohamed & Lamia, 2018). The participating students were asked to reflect on the writing activities they did prior to the writing tests and evaluate their usefulness in helping them to produce a good essay.

In the post-questionnaires, additional questions were included about the estimated number of hours the respondents had spent studying online and their video viewing frequency, as well as any difficulty they had encountered in fulfilling the tasks (refer to Appendix A.13). These self-reported data complemented the statistics records obtained from Moodle and Edpuzzle.

Learner satisfaction with a learning management system can be an antecedent for blended learning effectiveness (Kintu et al., 2017). In the third part of the post-questionnaires (see Appendix A.14-A.15), 10 Likert-scale items regarding student perceptions of the learning experiences were included. Finally, five open-ended questions (see Appendix A.15) adapted from Adnan (2017) provided an opportunity for the participants to contribute individual points of view, and thus revealed a wide range of attitudes (Berdie, 1986; Chamot, 1995).

3.8.1.3 Administration and Analysis of Questionnaires. The questionnaires were translated into Vietnamese to facilitate the participants' responses, as they were all native speakers of Vietnamese. The Vietnamese version was verified by two EFL lecturers, and then piloted with three 1st-year EFL students (two females and one male) who were not among the main sample of the study. The pilot trials showed that these respondents had no difficulties understanding and replying to the questionnaires.

The teachers and students agreed to set aside a specific class time for the students to complete the paper-pencil questionnaires. Class-time allocation also communicated to students the importance of the evaluations. The teachers left the room during survey time so that students would feel comfortable enough to provide authentic responses. Such administration of questionnaires is easier and helps attain a higher response rate than using web-based surveys (Nulty, 2008; L. D. Roberts, 2007). The questionnaires took the respondents 15 to 20 minutes to complete.

The participants consented to write their names on the questionnaires so that their responses before

and after flipped instruction could be compared in relation to their writing tests. Confidentiality was guaranteed throughout the study.

The data from students' rating were then entered into a spreadsheet, and the cases associated with missing values were removed. For assessing scale reliability, a Cronbach's alpha coefficient was calculated (Fraser et al., 1986). Cronbach's alpha is a measure of the internal consistency of the item scores (i.e., the extent to which the scores for the items on a scale correlate with one another). For the purposes of analysis, the report of mean scores makes it clear how big (or small) measured differences really are when comparing individual items. However, as Colliver et al. (2010) warned, "The sums of ratings reflect both the ratings and the number of items, which magnifies differences between scores and makes differences appear more important than they are" (p. 591). In this case, because of the small sample and violation of the normal distribution assumption, the Wilcoxon signed rank test, a non-parametric statistical hypothesis test, was suitable to compare students' attitudes in pre/post-test data. If the calculated p-value is more than 0.05, it can be concluded that there is no statistical difference between the two groups (i.e., pre- and post-questionnaires 1; and post-questionnaires 1 and 2).

For students' Vietnamese responses to the open-ended questions, the researcher produced meaning-based translations into English because not all expressions can be translated word for word (Jones & Kay, 1992). To generate reliable and valid data, the translations were checked by an EFL lecturer who, like the researcher, fully understands the participants' culture and language (Choi et al., 2012; Komori, 2015).

3.8.2 Writing Tests

To address RQ2 about students' writing achievements, pre- and post-tests of essay writing were collected in each phase of the study featuring a new type of essay.

- Weeks 4 & 9: Tests 1 and 2 about comparison essays
- Weeks 10 & 14: Tests 3 and 4 about classification essays

Assessment is important for identifying learners' abilities and levels of development (N. T. Carr, 2011). From a methodological perspective, collecting data from several points in time is essential for testing the long-term effects once an intervention is completed, such as in pre-test post-test designs (M. C. Roberts & Ilardi, 2003).

For each in-class writing test, the students were allowed 60 minutes to write an essay of at least 250 words (no reference materials allowed). As one of the learning outcomes was to prepare students for the English Qualifying Exam (using the format of IELTS, an international standardised test of English language proficiency for non-native English language speakers) in the final semester, the requirement of 250-word limit was strictly applied to all the writing tests. Students were told, however, they would

not be penalised for exceeding the word limit.

As components of ordinary class assessment, the writing tests focused on the types of essays the students practised during the course, and marking was based on the course's standardised writing rubric, adapted from IELTS Task 2 Writing band descriptors (see Appendix A.2). Constructs of the scale were applied to the following four subskills:

(**1**) *Task addressing* (similar to IELTS *task response*): Do students respond fully to all parts of the task? Are their ideas fully developed?

(**2**) *Coherence and cohesion*: How well do the students organise their ideas into paragraphs? Do the ideas flow logically from one to the next?

(**3**) *Lexical resource*: Do the students have sufficient vocabulary to respond effectively to the question? What errors are evident in word choice, spelling, and word formation?

(**4**) *Grammatical range and accuracy*: Do the students use a wide range of grammatical structures? Are there any frequent grammar errors?

Irrespective of the essay type, the general text structure followed a similar pattern: an introduction (hook and thesis statement), a body of writing (topic sentences and supporting paragraphs), and a conclusion (Folse et al., 2015). Figure 3.13 is a student's script, and Table 3.5 shows the codified annotations supporting the scores.

Figure 3.13.
An Example of Student's Work

Write an essay about the similarities and differences between face-to-face and online communication (250 - 400 words).

Nowadays, we have a lot of choices in communication. Face-to-face and online communication are two popular ways that people often use; also, there are many similarities and differences between two of them.

Firstly, we come to the similarities between face-to-face and online communication. All of the communicative situations ought to have communicative persons. We can have from two to group of people; besides, there must have the persons who listen to each another and the persons who talk to the rest. Moreover, the people who communicate have to pay attention to each other. For example, you have to listen or read the answer of your partner, and after that you can reply to them quickly and correctly.

Secondly, we should distinguish face-to-face from online communication through many differences. We can communicate with everyone without knowing or meeting them in online communication; whereas in contrast, the people who take part in face-to-face must look at the others directly. Moreover, in face to face communication we only have one way to communicate, that is speech. However, in online communication, we can have many ways such as texting, recording voice, video calls,...etc. Besides that, online communication can help you communicate without setting any appointments, it also help to save time and money, but it can make you lazier and lazier day by day. On the other hand, face-to-face can bring us closer and closer by concentrating clearly on the tune of voice, the facial expression, especially eyes contact. Anyway, we have to arrange our time to meet someone, sometimes our appointment will be canceled by personal problems or weather condition. Next, we can express our feeling by gesturing in face-to-face while we only use stickers or gifs in online communication. For instance, people can know or predict whether their partner talks lie or not by looking at him/ her eyes while people can be confused because they can not be able to anticipate through stickers or texts.

In conclusion, we can find that there are many similarities and differences between face-to-face and online communication. Basically, each way also has its virtue and drawbacks that affect to communicative process. With the development of technology nowadays, people can choose any way as long as it makes them feel convenient. But people should deliberate choosing the communicative way regularly and balance two of them with an aim to maintain the relationships and get the communicative goals.

Key for highlighting:

Task addressing

Coherence & cohesion

Lexical resource

Grammatical range & accuracy

Table 3.5.
Codified Annotations Supporting the Scores

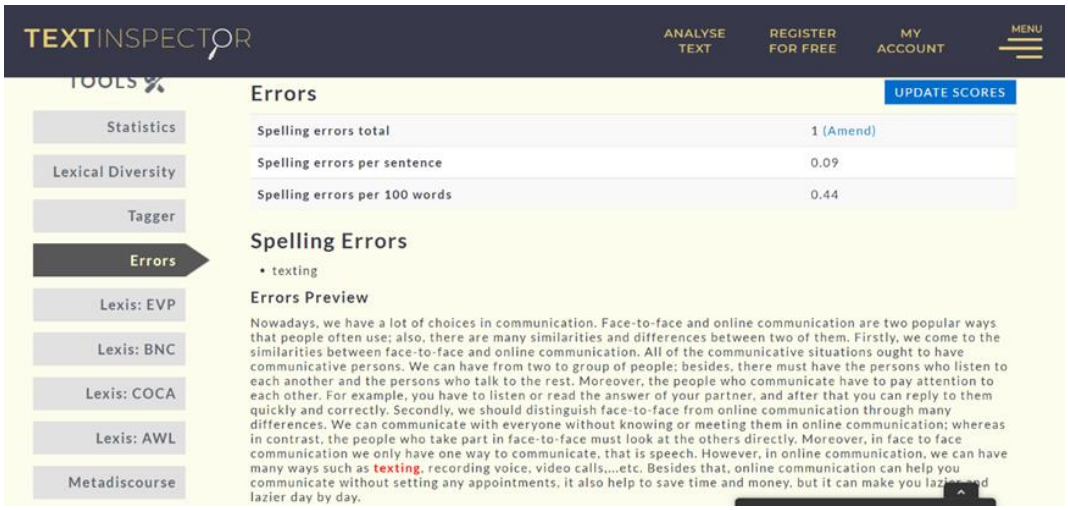
Criterion	Score/10	Annotations
Task addressing	6.5	Points of comparison are not stated. Some ideas are not adequately developed.
Coherence & cohesion	6	Present information with some organization, but there is a lack of overall progression.
Lexical resource	6	Use a limited range of vocabulary, especially when it comes to paraphrasing. There is also an overuse of "communicate" family words.
Grammatical range & accuracy	6	Use a mix of simple and complex sentence forms, but there are some run-on sentences. Some errors in the use of modal verbs.

Each element was evaluated from '0', suggesting the lowest attainment of writing, to '10', describing the highest possible mark. The use of analytic scoring in this study offered the potential to assess different essay constructs more accurately than a holistic scale (H. D. Brown & Abeywickrama, 2010; Weigle, 2002). To avoid bias, the researcher invited a second examiner, an experienced EFL lecturer from another university who was unfamiliar with the FC interventions, to participate in the analysis. An inter-rater reliability test measuring the degree of consistency across scores awarded by the two raters was then conducted (Hayes & Krippendorff, 2007).

While recent L2 writing research suggests that an FC approach can improve student performance (P. Lee et al., 2019; W.-C. V. Wu et al., 2020; Zou & Xie, 2019), the current study moved one step further to investigate not only student writing outcomes but also their *lexical resource* through the analysis of four academic essays. As can be seen from the student's script in Figure 3.13, the use of academic words (e.g., *distinguish, concentrate, predict*) was taken into account in the assessment of the writing (Coxhead, 2000; Nation, 2001). In order to obtain a high score in a standardised English proficiency test such as IELTS, language learners have to use vocabulary diversely and accurately (Engber, 1995). Such measures of vocabulary knowledge can predict written academic English proficiency and hence academic performance (Roche & Harrington, 2013). As discussed in Chapter 2, academic phrasal expressions (e.g., *each other* and *take part in* in Figure 3.13) have been considered indispensable in academic writing (Li & Schmitt, 2009). Metadiscourse markers (e.g., *on the other hand*, *for instance*, and *in conclusion* in Figure 3.13), which manifest how the arguments are presented and framed, are also regarded to be of the same importance as the content itself (Hyland & Tse, 2004).

The students' written essays in the four tests were typed into Word files. The features of the *lexical resource* were then analysed by a professional web tool, Text Inspector (Bax, 2012). This software allowed the researcher to check each example of coding in the context in which it appeared in the student text (as in Figure 3.13). To ensure accurate counting, any token incorrectly tagged by the software was altered or excluded from the analysis. As can be seen in Figure 3.14, the spelling error "texting" could be removed simply by clicking the "Amend" function.

Figure 3.14.
A Screenshot of Text Inspector



3.8.3 Pre-Test/Post-Test Design

To determine if there were any significant changes in student attitudes and achievements under two phases of interventions, statistical tests were applied for the pre/post-questionnaires and writing pre/post-tests.

The most common statistical tool in a pre-test post-test model is an analysis of variance (ANOVA). However, ANOVAs implicitly assume that groups are comparable at baseline prior to intervention. In practice, pre-existing differences are ubiquitous, and can result in pitfalls if ignored (D. T. Campbell & Kenny, 1999; Miller & Chapman, 2001). A strategy to avoid flawed interpretation is to apply an analysis of covariance (ANCOVA), where the pre-test scores are treated as covariates to control the effect of baseline varieties on the post-test scores. It is worth noting that ANCOVAs require that data must satisfy two essential conditions: the homogeneity of variance (i.e., equal distribution around the mean) and the normality of residuals (i.e., the differences between observed and predicted values of data were normally distributed). This is often hard to fulfill in educational research (Glass et al., 1972). A solution is to use a rank-transform ANCOVA, which can avoid all those assumptions and has similar power to ANCOVA (Lawson, 1983; Quade, 1967).

Rank-transform ANCOVAs were applied to compare the rates of improvement in the students' writing performances and investigate the changes (if any) in their perceptions in the case of the continued

usage of FC (Class A) and the case of the transition from FC to traditional approach (Class B). Rank ANCOVAs, a non-parametric alternative to parametric tests, are better suited for small samples and for data that are not normally distributed (Lawson, 1983; Quade, 1967).

3.8.4 Classroom Observations

Observations provided the researcher with first-hand experience of classroom behaviours that may have been difficult for participants to discuss openly (Creswell, 2009; Gray, 2009; Yin, 2014). Trying to be as unobtrusive as possible so that the participants would behave in a normal fashion (J. Bell, 2010; Yin, 2014), the researcher observed the classes as a non-participant observer, noting what was happening without taking part in the activities of the participants (Creswell, 2014). All the teaching sessions were observed in order to ascertain how the teachers conducted in-class activities and whether they circulated throughout the classroom to answer any questions the students had. With the students' consent, the students' preparedness, interactions and attitudes were also monitored. The observation notes do not serve as the main source of data, rather they provide data to complement (and prompt discussion about) the teachers' and students' views and recollections of the teaching and learning. The class period was observed in 10-minute segments using a revised version of the Teaching Dimensions Observation Protocol (TDOP) (Hora & Ferrare, 2010). In each segment, the occurrences of various activities and practices within the observation protocol (see Appendix A.4) were recorded when observed. The TDOP dimensions are as follows.

(**1**) *Teaching methods*: teacher-focused or student-focused instructions
(**2**) *Pedagogical moves*: pedagogical strategies
(**3**) *Teacher-student interactions*: types of questions and answers
(**4**) *Cognitive engagement*: how students engage with the material
(**5**) *Instructional technology*: teachers' use of technology and other artifacts for teaching

These dimensions were used to determine the frequency of student-centred activities in both flipped and non-flipped approaches (R. M. Clark & Besterfield-Sacre, 2017).

3.8.5 Semi-Structured Interviews

To explore how the participating students and teachers interpreted and gave meaning to their FC experiences, semi-structured interviews were conducted with them. Such interviews provided each respondent with an opportunity to discuss relevant issues, the aim being "to obtain authentic, detailed accounts from an individual" (Brenner et al., 1985, p. 3). The interview guide included a number of predetermined questions (see Appendix A.5 for the five main questions), but the interviewer could probe through follow-up questions to dig deeper into the interviewees' responses (Lingard & Kennedy, 2010; Miles et al., 2014). The interview questions were adapted from those of Hsieh et al. (2017). The students and teachers were asked similar questions concerning their prior (if any) and/or current experiences

of FCs, the benefits and drawbacks in FC implementation, and suggestions for improvement. Data obtained through the questionnaires and observations were also used as prompts for the interviews.

For each class, interviews were arranged with a focus group of four or five students (Week 14) and the teacher (Weeks 9 & 14) according to when the interviewees were available. Being interviewed in the parent tongue helped obviate the limitations of using a second language and built rapport (Andrews, 1995; E. W. Tsang, 1998) . Three interviews (totalling two hours) per class were conducted in Vietnamese and audio-recorded. Respondents were assured of confidentiality to encourage them to express their thoughts freely.

3.8.5.1 Student Interviews. Four to five students from each class volunteered to be interviewed in Week 14 to share their thoughts about the entire course, thus allowing for more detailed responses than were given in the questionnaires. Yeong et al. (2018) report that Asian populations tend to "politely" report good things and conceal bad things in front of others. Focus groups, therefore, help create a non-threatening environment where valuable information can be obtained from participants' discussions (J. Bell, 2010). This allowed the participants to build from one another's responses, and to feel more relaxed than if the interviews had been conducted one-to-one (L. Cohen et al., 2011). Although there are limitations to focus groups such as dominant voices, the researcher encouraged diverse voices by asking different group members to speak up (Smithson, 2000).

3.8.5.2 Teacher Interviews. To address RQ3, the teachers' interviews were conducted on an individual basis to gain insight into their views of FCs. The teachers were interviewed at two points: the first at the midpoint (Week 9) and the second at the end of the study (Week 14). Conducting the interviews at different times during the semester provided the researcher with a broad narration of the teachers' experiences. Their academic background and teaching experience were used to support the interpretation (Corbin & Strauss, 2008).

3.9 Issues of Validity, Reliability and Ethics

The issue of trustworthiness is of great importance for all researchers as it reflects the research quality. The four tests proposed for that purpose (Yin, 1994) will now be discussed (see Table 3.6).

3.9.1 Construct Validity

Construct validity involves selecting the most appropriate tools to measure what the study claims to measure (Denzin & Lincoln, 1994). In this study, a combination of different data sets that include questionnaires, observations, interviews and writing tests, collected at different stages, helps capture a fuller picture of the situation being investigated (Creswell & Plano Clark, 2011; Yin, 2014). According to Fraenkel (2006), using a variety of instruments for data collection; in other words, data triangulation,

Table 3.6.
Checking Case Study Design

Test	Case study tactic	Phase of research
Construct validity	Use multiple sources of evidence	Data collection
	Establish chain of evidence	Data collection
	Have key informants review draft case study report	Composition
Internal validity	Do pattern matching	Data analysis
	Do explanation building	Data analysis
	Do time series analysis	Data analysis
External validity	Use replication logic in multiple case studies	Research design
Reliability	Use case study protocol (i.e., the entire set of procedures involved in data collection)	Data collection
	Develop case study database	Data collection

enhances the quality of data and the accuracy of data interpretation. A clear chain of evidence was also provided to explicate the whole procedure from data collection to data analysis.

Member checking, or participant verification (Rager, 2005), was employed to ensure that the researcher's interpretations accurately reflected the participants' opinions (R. B. Johnson & Christensen, 2014; Merriam, 1998). All interviewees were provided with the draft report for member checking and validation.

3.9.2 Internal Validity

Internal validity is the extent to which a study establishes a causal relationship. Pattern matching involved comparing a predicted pattern with one revealed by the findings from the case study. If the empirically found patterns match the predicted ones, the findings can confirm the hypotheses/propositions, and enhance the rigour of the study (Yin, 2014). Any details that did not conform to any of the identified patterns were also taken into account for alternative explanations, while presenting multiple perspectives of a complex picture.

For time series analysis, the study developed a multi-phase design to obtain data through repeated measurements over time (every 5 weeks of the interventions). The analysis of three pre/post-questionnaires and four writing pre/post-tests revealed some patterns in the students' attitudes and performances.

3.9.3 External Validity

External validity is the extent to which the results can be generalised to other contexts. By using Yin's (2014) logic of replication (i.e., replicating the data collection procedures for each class), the researcher engaged in within-case and cross-case analyses across both classes and the teacher/student participants to examine similar and varying perspectives on FC experiences. Case studies using both within- and cross-case analyses have been found to be more effective at generating theoretical frameworks and propositions than those with only within-case or only cross-case analysis (Barratt et al., 2011).

3.9.4 Reliability

Reliability refers to the measures undertaken to provide information about the trustworthiness which can be achieved through transparency and replication (Denzin & Lincoln, 1994; Gibbert et al., 2008). In order to increase the transparency of the research, an electronic database was organised, categorised and made available for later retrieval (Yin, 2014). The documentation includes audio files, notes from interviews and observations, tabular materials such as weekly class schedules and survey spreadsheets, learning analytics, and statistical analyses. Some elements of this evidence base are presented as Appendix A.1 (weekly schedules) and Appendix B.1-B.4 (learning analytics), enabling subsequent researchers to arrive at the same results if they conduct the study along the same steps (Denzin & Lincoln, 1994).

3.9.5 Ethical Considerations

This research was conducted consistent with the University of Technology Sydney's Human Research Ethics Committee's Code of Practice. Ethical approval was obtained in December 2018 (Ref. No.: ETH18-2960). Permission to conduct the study was also granted by Dean of the Vietnamese university's faculty. The researcher then talked to the aspirant teachers about the significance of the research. When they verbally expressed interest in participating, the researcher discussed in detail the study procedure. With the teachers' and students' approval, the researcher visited their classes to invite their students to participate in the project. Invitation letters, information sheets and consent forms were distributed to potential teacher and student participants in Week 4 (refer to Appendix A.6). The teachers and their students were invited to volunteer for the research project and, upon giving informed consent, sign a written consent form. They were advised about the nature of the research and that participation was voluntary; it would not affect course progression or grades. They were also reassured of the anonymity of the results, which would be used for research purposes only. They could opt out at any time and decline any question they did not wish to answer (Bryman, 2006).

The study exposed participants to no potential physical or mental risks. As for observations, in order to minimise discomfort experienced by the teachers and students, the researcher explained what she would be observing. The researcher ensured she had the teachers and students' consent for her classroom

visits prior to data collection. Class members were informed that if they did not wish to be observed, they could place a post-it sticker on their table. The interview questions were refined and piloted to ensure they were non-discriminatory and respectful. The participants could decline to answer any question for any or no reason.

To minimise disruption and inconvenience for the students and teachers, two of the writing tests (i.e., the two post-tests) comprised ordinary class assessment; the external marking was independent of the teachers' marking. All names and other identifying personal details were removed, and numerical codes (for all students) or pseudonyms (for focus students) were assigned prior to data analysis. All the electronic files are password protected and only accessible to the researcher. Physical items such as consent forms and observation notes were scanned to make soft copies. All the hard copies will be destroyed 5 years after the completion of the study. These steps are intended to minimise risks for all the participants.

3.10 Summary of the Chapter

This chapter outlined the research design of the study, including methodology, theoretical framework, participants, instruments, study procedure and issues of validity, reliability and ethics. A mixed methods design was employed to explore the effects of FCs on an EFL academic writing course through the comparison of teachers' and students' perceptions and student learning outcomes. To answer the research questions, two case studies were deployed with the triangulation of both quantitative and qualitative data gathered over two phases of interventions. Quantitative data included pre/post-questionnaires, writing pre/post-tests and text analyses; qualitative data included classroom observations, teachers' and students' interviews and students' written feedback in the questionnaires.The findings that emerged from data analyses will be presented in the next chapter.

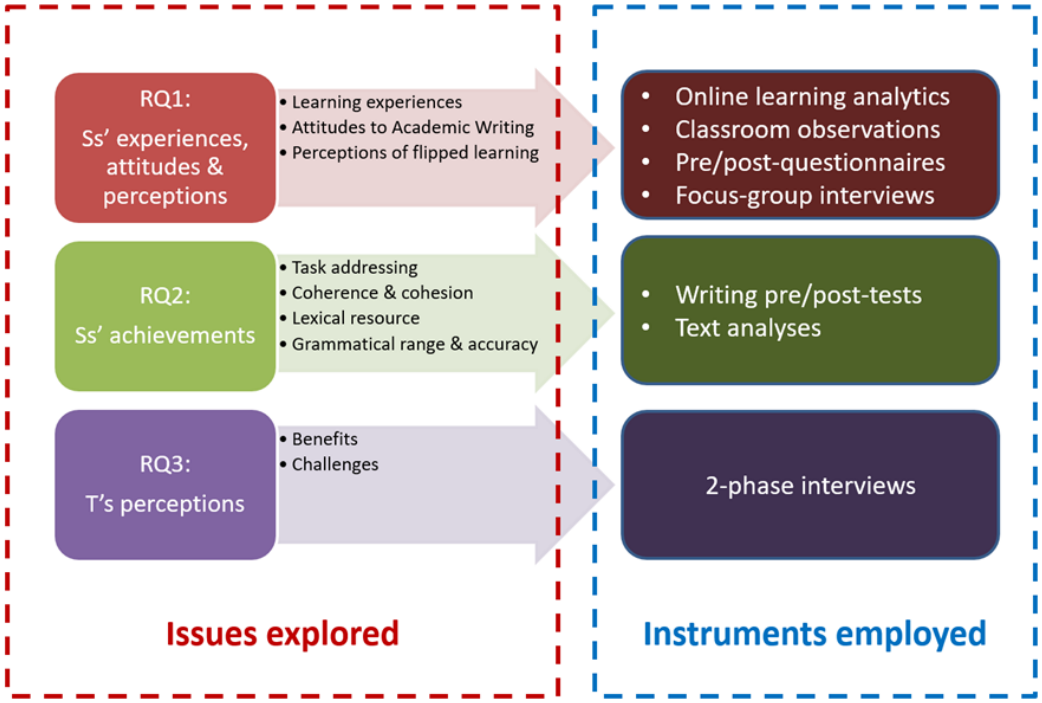
CHAPTER 4

Case Study A: Data & Findings

4.1 Introduction to the Chapter

This chapter details a class of 1st-year English major students and their teacher Co Huong as they experienced EFL Academic Writing using the flipped classroom (FC) for 10 weeks. The alignment of the research questions (RQ) to the data collection strategies is illustrated in Figure 4.1.

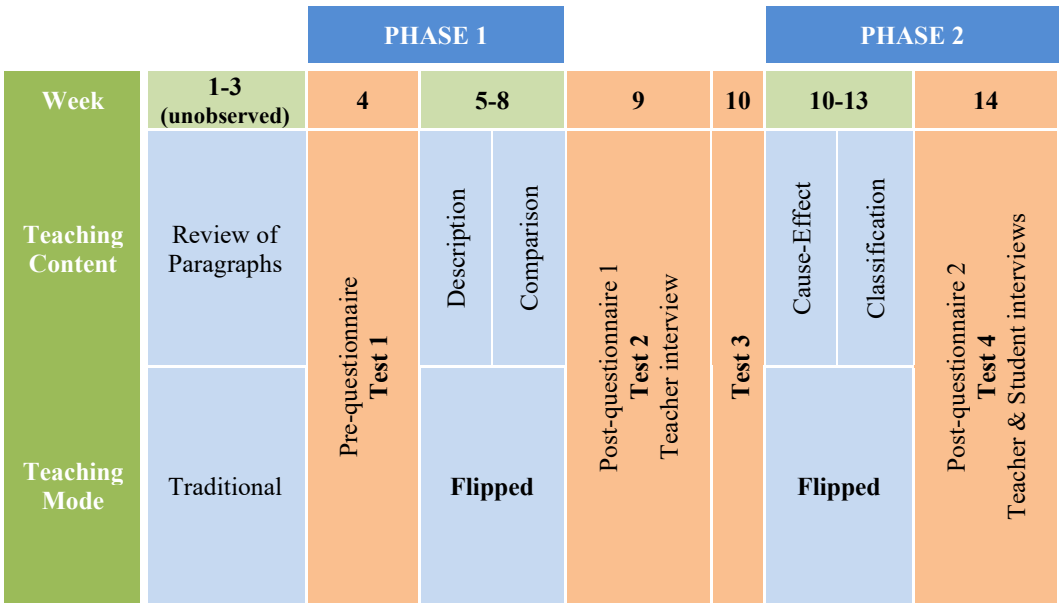
Figure 4.1.
Issues Explored and Instruments Employed in the Current Study



In this case study, two stages (Phase 1: Weeks 4 to 8; Phase 2: Weeks 10 to 14) were examined for any changes in the intervention effect over time. Table 4.1 shows the timeline of the teaching content and mode throughout the study.

In this chapter, the learning activities in the two phases will be described, followed by an investigation into the students' attitudes, perceptions and achievements, as well as the teacher's perceptions. Each

Table 4.1.
Research Timeline for Class A



data section begins with an overview of the whole class, and then with a focus on particular student groupings to yield insights into the impacts of factors such as students' academic profiles and online engagement on their attitudes, perceptions and achievements.

4.2 Co Huong's Classroom

4.2.1 Co Huong

Co Huong was aged in her late thirties at the time of the study. She has a Master of Arts in TESOL and had 16 years' teaching experience (with 10 years teaching Writing to undergraduates). Prior to the FC implementation, she had attended workshops on blended and flipped learning and knew how to use some online software programs to create games and quizzes. However, she had never previously applied an FC approach in her teaching, and in her interview she expressed initial reservations about its effectiveness. Her educational belief was that students should be provided with a motivational learning environment to promote their engagement. Section 4.8 presents her perceptions of the research intervention.

4.2.2 Co Huong's Students

Twenty-eight students opted for Co Huong's Tuesday class of the writing course, of whom 21 (15 females and six males, aged 18 to 21 years) provided a complete data set of questionnaire responses and writing tests.

Prior to the intervention, the students' exposure to technology was surveyed to determine their familiarity with digital devices and their applications, which helped the researcher anticipate their online

learning engagement (see Appendix A.11 for the six question items). It was noted from the pre-questionnaire that 10 of the 21 students had already experienced online learning and thus might find it easier to adapt to an FC. While a majority of the participants were equipped with both laptops/desktops and smartphones, four students (Students 2, 5, 14, 15) had access to smartphones only.

The students indicated that they were comfortable with technology, based on their use of digital devices. Most students reported spending much of their screen time on social networking (six students – 29%) and entertainment (six students – 29%), compared with study purposes (four students – 19%), communication (three students – 14%) and accessing information (two students – 9%). Among these students, seven, although reporting using devices mostly for other purposes, rated social networking as the second-most frequent activity. Familiarity on the students' part with technology does not necessarily transfer to ease with flipped learning (Aesaert et al., 2017; Ng, 2012). Moreover, as most of the students would spend much time on social media and entertainment, such habits might make it hard for them to remain focused on their online study.

As students' attitudes towards the subject can also influence their learning (Getie, 2020), their initial attitudes to Academic Writing will be presented in the next sub-section.

4.2.2.1 Students' Initial Attitudes to Academic Writing. In Week 4, before the intervention, the students were given the pre-questionnaire to gather not only background information about them but also the basis for the later tracking of their attitudinal changes after the FC. The pre-questionnaire consisted of 16 question items about attitudes to English Academic Writing (see Appendix A.3).

The response scale of this section ranged from **1** to **5**, and values for the scale are as follows: **1** = I strongly disagree; **2** = I disagree; **3** = Undecided; **4** = I agree; **5** = I strongly agree. The Likert scale was divided into equivalent ranges and assigned a general meaning to each range for ease of discussion, where **1** was a highly negative response and **5** a highly positive response. A similar breakdown can be found in Freiermuth and Huang (2015) and in Wichadee (2018). Table 4.2 shows a full list of interpretations. (This table also appears in Chapter 5 as Table 5.2).

Table 4.2.
Likert Scale Breakdown

Likert Score Range	Rating (R)
4.3 – 5.0	Highly Positive (**HP**)
3.7 – 4.29	Positive (**P**)
3.0 – 3.69	Moderate or above (**M+**)
2.3 – 2.99	Moderate or below (**M–**)
1.7 – 2.29	Negative (**N**)
1.0 – 1.69	Highly Negative (**HN**)

Three aspects – motivation, engagement and perceived effectiveness – were taken into consideration in the design, as well as in the analysis of the survey. The descriptive statistics of students' attitudes

based on the pre-questionnaire are provided in Table 4.3.

Table 4.3.
Descriptive Statistics of Students' Initial Attitudes to English Academic Writing (EAW)

Pre-Questionnaire Item	Mean (*SD*)	Rating
Motivation in EAW		
1. I enjoy writing academic essays.	3.43 (0.68)	Moderate or above (**M+**)
2. I believe writing could be of some value to me.	4.48 (0.60)	Highly Positive (**HP**)
3. I like to write even if my writing will not be graded.	3.10 (1.00)	Moderate or above (**M+**)
4. I think I do pretty well in writing, compared to my classmates.	2.33 (0.86)	Moderate or below (**M–**)
Engagement in EAW		
5. I always finish my writing homework before class.	3.57 (0.87)	Moderate or above (**M+**)
6. During writing class, I ask questions to help me learn.	2.86 (0.96)	Moderate or below (**M–**)
7. I feel excited about the things I learn in writing class.	3.76 (0.83)	Positive (**P**)
8. I often look for ways to improve my writing.	3.95 (0.74)	Positive (**P**)
Perceived Effectiveness in EAW		
9. My writing has improved with time.	3.48 (1.03)	Moderate or above (**M+**)
10. I am able to clearly express my ideas in writing.	3.05 (0.92)	Moderate or above (**M+**)
11. I know how to use VOCABULARY appropriately in my writing.	2.76 (1.00)	Moderate or below (**M–**)
12. I know how to use COLLOCATIONS appropriately in my writing.	2.62 (0.92)	Moderate or below (**M–**)
13. I know how to make an appropriate essay organisation.	3.33 (0.73)	Moderate or above (**M+**)
14. Before-class tasks help me prepare for the lessons better.	3.76 (1.00)	Positive (**P**)
15. Peers' editing helps me improve my writing.	4.10 (0.63)	Positive (**P**)
16. A teacher's feedback helps me improve my writing.	4.52 (0.68)	Highly Positive (**HP**)

These data indicate that the students highly appreciated the utility of writing (Item 2). However, their learning motivation seemed to be instrumental, as they did not show great willingness to write for pleasure (Item 1) or in the absence of formal assessment (Item 3). They tended to attribute inferiority to their own writing when asked to compare with their classmates (Item 4).

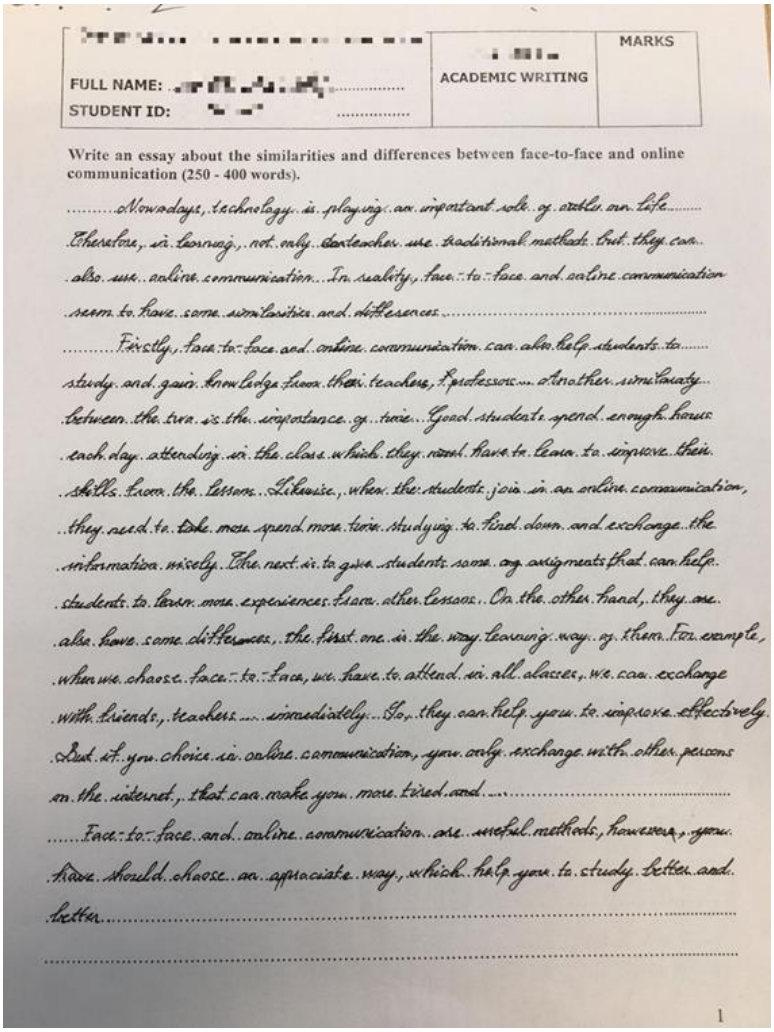
In terms of engagement, the respondents appeared to be interested in learning (Item 7) and seeking improvements (Item 8), but they were quite reluctant to ask for the teacher's help (Item 6). Their commitment to writing homework (Item 5) was slightly above moderate.

These statistics illustrate that before the intervention, the students did not perceive significant improvement in writing (Item 9). Their ratings of perceived effectiveness in specific writing features (Items 10-13) were around the scale's median. These low ratings imply low confidence in their own writing, and particularly in knowledge of linguistic features (Items 11 & 12). To them, the most effective ways of learning were from peer feedback (Item 15) and teacher feedback (Item 16).

In summary, the students attending the course were not intrinsically motivated and lacked confidence in their writing ability. The results of the first writing test would reveal their writing proficiency.

4.2.2.2 Students' Writing Proficiency. To examine the students' writing levels, Test 1 was undertaken at the beginning of the study and centred on comparison essays as outlined in the syllabus. The word limit was set between 250 and 400 words. The following excerpt of a student's essay demonstrates how a comparison topic was given before the teacher's instruction about this type of essay.

Figure 4.2.
Student A2's First Comparison Essay (Test 1)



MARKS

FULL NAME: [redacted]

STUDENT ID: [redacted]

ACADEMIC WRITING

Write an essay about the similarities and differences between face-to-face and online communication (250 - 400 words).

Nowadays, technology is playing an important role of our life. Therefore, in learning, not only the teacher use traditional methods but they can also use online communication. In reality, face-to-face and online communication seem to have some similarities and differences.

Firstly, face-to-face and online communication can also help students to study and gain knowledge from their teachers, professors. Another similarity between the two is the importance of time. Good students spend enough hours each day attending in the class which they need have to learn to improve their skills from the lessons. Likewise, when the students join in an online communication, they need to take more spend more time studying to find down and exchange the information wisely. The next is to give students some assignments that can help students to learn more experiences from other lessons. On the other hand, they are also have some differences, the first one is the way learning way of them. For example, when we choose face-to-face, we have to attend in all places, we can exchange with friends, teachers immediately. So, they can help you to improve effectively. But if you choice is online communication, you only exchange with other persons on the internet, that can make you more tired and

Face-to-face and online communication are useful methods, however, you have should choose an appropriate way, which help you to study better and better.

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Before the FC, the students were not instructed on how to write an academic essay, so they did not follow an appropriate structure. They mostly listed the similarities and/or differences without supporting ideas, and ended up with poorly developed essays. Of the 21 students' writing pieces, 12 were below the word limit (see Appendix B.11), and seven met the word requirement, of which two exceeded 400 words (Students 1 and 21 as highlighted in B.11).

4.2.2.3 Student Profiles. Across this class, as with most language classes, there was a range of abilities, high and low performers. Students in these categories were identified for later consideration of how their results were related to the FC.

Academic Profiles: Low and High Performers

To investigate whether the FC impacted students of different levels similarly, low- and high-performing students were taken into consideration. The basis for this categorisation was Test 1 median scores: low performers with performances below the 50th percentile and high performers with performances above the 50th percentile. In this case, the scores below 5.25 placed them in a 'low' group, and the others in a 'high' group. The level division with mean scores and standard deviation (SD) of each group is shown in Table 4.4.

Table 4.4.
Level Division

Level	N	Mean	SD
Low	10	4.20	0.90
High	11	6.12	0.60
Total	21	5.20	1.23

Additionally, since online engagement was an independent decision, the students were further considered in terms of their use of online resources.

Use-Frequency Profiles: Consistent, Partial Users, and Non-Users

The students were also grouped based on their engagement in the e-learning environment because of its impact on their learning performance and satisfaction. Learning analytics revealed various patterns of the students' online engagement and categorised them as consistent users (10 students), partial users (nine students) and non-users (two students) of online resources. Consistent users watched all the videos and did all the online tasks; partial users did not commit to these activities regularly; and non-users demonstrated little involvement in online learning. To facilitate comparison, two students (one male and one female) from each of the three profiles were selected so that there was one who was low performing and one who was high performing. Table 4.5 shows the groupings with details about their codes, gender and levels under pseudonyms.

Table 4.5.
Groups of Use-Frequency

Consistent users (CU)	Partial users (PU)	Non-users (NU)
Mai	***Thanh***	***Ngoc***
Student A7, Female, Low	Student A2, Female, Low	Student A15, Female, Low
Huu	***Trong***	***Tien***
Student A1, Male, High	Student A21, Male, High	Student A14, Male, High

In an FC, online and in-class components are considered indispensable. The next sections investigate the students' use of both online and in-class activities over the two phases of the semester.

4.3 Students' Learning Experiences in Phase 1

Learning experiences in Phase 1 (Weeks 4 to 8 of the 15-week semester) consisted of online and subsequent in-class activities. The data were captured by Edpuzzle and Moodle for online sessions, classroom observation for in-class sessions, together with the students' comments from post-questionnaire 1 (see Appendix A.14).

4.3.1 Online Learning

The video lectures and online tasks were posted on Moodle one week before each face-to-face session. The pre-class Edpuzzle videos delivered basic content knowledge with embedded questions to help focus the students' attention on the key concepts of the lesson. A total of five videos that averaged below 5 minutes in length were provided, of which the longest lasted 7 minutes 53 seconds. The researcher made the first video as a model. Videos 3 and 4 were made by the two participant teachers; Videos 2 and 5 were taken from open resources. Associated online tasks focused on simple practice with the key concepts, accompanied by reference materials. The students were expected to complete the pre-class work to fully benefit from higher-order thinking activities in class. The students' viewing activities in this phase were measured by Edpuzzle. As shown in Table 4.6, most students watched the whole videos.

Table 4.6.
Tally of Students and Percentage of Video Viewed in Phase 1 (N=21)

Percentage of video viewed	Video 1 (3:27)	Video 2 (2:01)	Video 3 (6:41)	Video 4 (7:53)	Video 5 (1:48)
	Number of students				
0 – 10%	3	4	6	3	4
20 – 40%	0	3	0	0	0
50 – 70%	1	0	0	2	0
80 – 100%	17	14	15	16	17

While these figures present the number of viewers for each video, the question is whether they were the same or different viewers throughout the videos. Learning analytics data revealed that of those

who viewed consistently, 13 watched all the five videos, with the highest number of views, 17, for the first and the last videos. Of the non-viewers, Student A14 watched only the first video, and Students A2 and A15 viewed no videos at all during the first stage of the FC approach (see further details in Appendix B.1).

The students' responses to the post-questionnaire revealed some reasons for not engaging. The least responsive students (Students A2, A14 and A15) were the ones who, in the pre-questionnaire, reported having no access to digital devices other than smartphones. Student A2 stated in her responses that, having no laptop, she could not watch the videos and found it time-consuming to do online activities on her phone. Student A15 reported difficulty in logging in to watch the videos. It should also be noted that prior to the study, Students A2 and A14 had no experience in online learning and used their smartphones mostly for social networking and entertainment. Difficulty in logging in to Edpuzzle and the lack of desktops/laptops might have discouraged these students' viewing uptake.

In terms of accompanying online activities, 11 of the 21 students completed all five tasks in Phase 1. Students A14 and A15 did not participate in any of these online activities (see Appendix B.2), although it had been made clear that task completion contributed to their formative assessment. Student A2 remained inactive online until Activity 4, and Students A6, A16 and A21 abandoned the last two activities, citing heavy workloads in their responses to the post-questionnaire. In the following transcripts, student codes (e.g., A1: Student 1 of Class A) and data sources are in square brackets [ ].

Students A14 and A16 provided specific reasons for not completing the pre-class work:

- *There are too many words and too much content online. My eyes are sometimes tired* [A14, post-questionnaire 1].
- *Logging in to watch videos and doing exercises on smartphone are quite complicated* [A16, post-questionnaire 1].

When asked about learning challenges, four students mentioned having difficulties logging in to Edpuzzle to watch the videos, and three others complained about the amount of pre-class work, for example:

- *Sometimes, there are too many exercises and resources, so I can't complete them all* [A17, post-questionnaire 1].

Other troubles were related to technology and study skills:

- *I forgot my account, so I had some problems when creating a new one. Also, I think my self-study skill is bad* [A19, post-questionnaire 1].

In terms of comprehension levels, 16 of the 21 students indicated that they understood the online materials "Well" (11 students) or "Quite well" (five students). However, two students admitted they had only a little understanding of the video content due to difficult theory content and fast pace of presentation, despite the fact that they could pause and rewind the videos:

- *The theory is difficult to understand and absorb* [A18, post-questionnaire 1].
- *Fast* [presentation] *slides. I haven't finished reading the slide when the question slide* [embedded question in the video] *comes* [A19, post-questionnaire 1].

The students also indicated how they studied at home. Most (14 students) spent one-to-two hours studying online before class, three students spent less than one hour, and only one student spent more than 3 hours doing online activities (Student A19). Regarding the total time spent, 10 students devoted 2 hours to home practice. Despite some complaints about the workload, few students exceeded the expectation of 5 hours of private study (as recommended in the course outline).

Of the two students who spent the most time on individual study, Student A11 claimed that she might spend up to 14 hours per week studying:

- *I spend 1–2 hours per day for home study (7–14 hours per week). I often read the textbook before class* [A11, post-questionnaire 1].

Student A15 also spent up to 12 hours preparing for the new lessons and practising writing. Interestingly, it seemed that the frequency of online engagement did not really affect these students' learning habits. Student A11 was identified (based on online learning analytics) as a consistent user, while Student A15 was a non-user of the online resources. It can be inferred that some students, like Student A15, might prefer to learn their own way.

In general, the students who had experienced online learning previously, and who owned both laptops/desktops/tablets and smartphones, tended to engage more in online activities. The two non-users of online materials were those who depended exclusively on smartphones for their study. The next sub-section will describe how in-class activities were conducted.

4.3.2 In-Class Learning

Once a week, the students attended the class for three periods (50 minutes each). The researcher observed all the class sessions. An adaptation of the Teaching Dimensions Observation Protocol (TDOP) (Hora & Ferrare, 2010), which divided the observation into 10-minute intervals, was used to for notetaking. The activities within the first 50 minutes of the class are shown in Table 4.7 (see the Observation Code Bank in Appendix A.4 for further details).

Table 4.7.
An Example of Teaching Dimensions Observation Protocol in Phase 1

Min	**0–9:59**	**10-19:59**	**20–29:59** **30–39:59**	**40–49:59**
Teaching Methods	Interactive lecture: understanding check	Pair work: homework check	Group work	Student presentation
Pedagogical Moves	Organisation: transition from online session	Instructor moves into audience for individual support	Instructor moves into audience for individual support	Assessment
T-S Interactions	Comprehension question	Students' short responses	Students' long responses	Giving feedback
Cognitive Engagement	Reciting facts	Articulating ideas on a topic	Creating a piece of writing	Connections to the real world
Instructional Technology	Powerpoint slides	Books Chalkboard	Poster Chalkboard	Notes Powerpoint slides

At the beginning of a new lesson, Co Huong briefly reviewed online materials. Her review did not reiterate factual information from the videos, but instead fostered conceptual understanding of essay genres through a warm-up activity. For example, she divided the class into two groups for a hot-seat activity. One student from each group would guess the words (i.e., key terms of the new lesson shown on the slides) based on the definitions provided by the group members. After that, the students worked in pairs/groups for a homework check; they were encouraged to ask the teacher questions during that time. When it came to practice activities, Co Huong gave instructions and illustrative examples. The students worked on two or three tasks individually (e.g., writing an introduction) and collaboratively (e.g., producing a brief essay outline). Meanwhile, Co Huong walked around the classroom and offered help whenever needed. The students presented their writing products on the board or as posters to the whole class. After the student presentations, there was time for peer feedback. Co Huong then gave her own detailed feedback.

When asked about the in-class sessions, the most common response (10 students) was that they had no further suggestions for improvement. Three students expressed their satisfaction about the classroom activities:

- *I think the in-class sessions are very effective to better my study* [A5, post-questionnaire 1].
- *I find the in-class content well-aligned with the online one and adequate for my level* [A17, post-questionnaire 1].
- *I'm totally satisfied with the in-class sessions* [A19, post-questionnaire 1].

Five students requested more group work and games, while one student recommended a reduction in

in-class activities to make time for teacher feedback:

- *Reduce the exercises so that the teacher could give correction to all the group assignments* [A10, post-questionnaire 1].

As most online tasks were automatically scored, some students requested further teacher explanation in the subsequent in-class sessions:

- *In class, the teacher should spend time explaining the online lessons and exercises first* [A7, post-questionnaire 1].

Although Co Huong did comment on their online writing tasks, there was still a need for further feedback:

- *Explain and correct students' common mistakes they have made online* [A20, post-questionnaire 1].

Despite some problems encountered online, the students seemed to get on quite well with FC activities in the first phase. Some changes were made in the second phase to accommodate their requests.

4.4 Students' Learning Experiences in Phase 2

It was important to discern whether the effects of FC instruction might have increased over time as the teacher gained more experience with implementing the pedagogy. For the second phase, the researcher consulted with the teachers about some adjustments based on students' suggestions in Phase 1. There was a reduction in the numbers of lecture videos and online tasks in response to the students' comments about the workload. However, near the end of the study, the students' commitment to online learning waned, which will be explored in the following section.

4.4.1 Online Learning

In Phase 2, the students were required to watch three videos. Video 6 was made by a teacher participant, while Videos 7 and 8 were from open resources. The learning analytics captured by Edpuzzle are shown in Table 4.8 and indicate an attrition with regard to the final two videos.

Table 4.8.
Tally of Students and Percentage of Video Viewed in Phase 2 (N=21)

Percentage of video viewed	**Video 6 (5:18)**	**Video 7 (9:13)**	**Video 8 (3:55)**
	Number of students		
0 – 10%	4	7	6
20 – 40%	0	0	0
50 – 70%	1	0	1
80 – 100%	16	14	14

Further analyses show that 13 students watched all the three videos in Phase 2, of whom were 10 consistent viewers in Phase 1. However, in this phase, no further login was reported after these students' first access to the videos. The decrease in video logins implies that either the students had no difficulty watching the videos on Edpuzzle or they might have no time to review the lesson content. As well as three non-viewers, as noted in Phase 1 (Students A2, A14 & A15), Student A8 watched no videos, and Student A21 only watched the first video (see Appendix B.3).

Their responses to the second post-questionnaire reveal some similar issues to Phase 1. Student 2 remained frustrated with learning online on her smartphone:

- *I use a smartphone, so it's inconvenient and time-consuming to complete all the tasks* [A2, post-questionnaire 2].

Students A8 and A15 reported having trouble logging in to watch the videos:

- *Logging in for videos is quite confusing* [A8, post-questionnaire 2].

Concerning online activities, 14 students fulfilled all the tasks for Phase 2. Students A14 and A15, who did not engage in online learning in Phase 1, continued to show no online actions. Students A3 did no tasks and Students A5, A6 and A21 undertook only one task. According to Student A3, low Internet connection and lack of time acted as deterrents to his online study.

In terms of lesson comprehension, a larger proportion of students (19 of the 21) than in Phase 1 claimed to understand "Very well" (one student), "Well" (eight students) or "Quite well" (10 students):

- *I can understand the video content because the language use and explanation are comprehensible and clear* [A10, post-questionnaire 2].
- *Understand the lesson content through examples and questions* [A20, post-questionnaire 2].

Two students admitted they had only a little understanding of the video content due to their limited vocabulary, although an attempt had been made to control the vocabulary in the videos with student abilities in mind.

In both phases, through their choices in the post-questionnaires, students expressed a preference for videos created by native-English speakers and the teacher-in-charge, as opposed to other non-native speakers:

- *I'm used to native speakers' and my teacher's accents* [A8, post-questionnaire 1].
- *I may not understand the pronunciation of speakers other than my teacher* [A17, post-questionnaire 2].

In Phase 2, only five students encountered difficulty with the flipped approach, but they reported having to complete many more exercises from other courses in preparation for end-of-course exams. Seventeen students stated that it took them one-to-two hours to complete the online activities. They tended to spend less time on Moodle, but more time on their own writing practice. Of the two dedicated learners in both phases, Student A11 spent up to 14 hours practising writing at home, and Student A15 reported spending up to 8 hours. However, they spent less time on individual study than they did in Phase 1.

4.4.2 In-Class Learning

As in Phase 1, the class activities were observed, and notes taken. The Teaching Dimensions Observation Protocol (TDOP) (Hora & Ferrare, 2010) used for the first 50 minutes of the class in Phase 2 is shown in Table 4.9.

In this phase, to arouse the students' interest, Co Huong organised more mini-games and utilised smartphones in the classroom. For instance, Kahoot, a free game-based learning platform, was used to devise a multiple-choice quiz that students could access via a web browser or an app on their phones. After homework check, Co Huong gave instructions and illustrative examples about writing activities. The students worked on two or three tasks in pairs (e.g., writing supporting sentences) and in groups (e.g., revising an outline). Meanwhile, Co Huong walked around the classroom and offered help as needed. After student presentations on their outlines to the whole class, peer feedback was given. Co Huong then gave detailed feedback.

Table 4.9.
An Example of Teaching Dimensions Observation Protocol in Phase 2

Min	**0–9:59**	**10-19:59**	**20–29:59** **30–39:59**	**40–49:59**
Teaching Methods	Interactive lecture: Kahoot quiz	Pair work: homework check	Group work	Student presentation
Pedagogical Moves	Organisation: transition from online session	Instructor moves into audience for individual support	Instructor moves into audience for individual support	Assessment
T-S Interactions	Display question Student response	Students' short responses	Students' long responses	Giving feedback
Cognitive Engagement	Reciting facts	Articulating ideas on a topic	Creating a piece of writing	Connections to the real world
Instructional Technology	Game-based learning platform	Books Chalkboard	Worksheets Chalkboard	Notes Powerpoint slides

In Phase 2, seven students furnished satisfactory comments about the in-class sessions, while others suggested ways to improve games/groupwork and enhance student interactions, for example:

- *Questions in games should not be too hard; games played with music to make them more exciting* [A6, post-questionnaire 2].

As in Phase 1, they valued the chance to learn from their peers' and the teacher's feedback, as well as requesting explanations for their writing mistakes:

- *I'd like to read my friends' essays and learn from their new ideas* [A21, post-questionnaire 2].
- *In class, the teacher should give more detailed feedback on students' essays* [A17, post-questionnaire 2].

After 10 weeks of flipped instruction, the students had quite a thorough view of this new teaching pedagogy. Their responses to the post-questionnaires and the focus group interview provide further insights into their attitudes towards English Academic Writing (EAW) and their perceptions of flipped learning.

4.5 Students' Attitudes to Academic Writing

By continuously applying the flipped pedagogy in the same course, the researcher set out to examine how its instructional effects evolved over time. In order to track students' attitudinal changes, in Weeks 9 and 14, the students filled out the same post-questionnaires, which had 16 questions about their attitudes towards English Academic Writing (EAW) (as in the pre-questionnaire), 10 questions about their perceptions of the FC, and five open-ended questions (see Appendix A.3). These questionnaires focused on the students' attitudes towards English Academic Writing (EAW) and their perceptions of flipped learning. The reliability of the three questionnaires was measured and generated acceptable Cronbach's alpha coefficients of 0.875 (16-item pre-questionnaire), 0.777 (26-item post-questionnaire 1), and 0.793 (26-item post-questionnaire 2).

4.5.1 Students' Attitudes to Academic Writing Across the Phrases

After 10 weeks of FC, the students described themselves as more motivated for Academic Writing, more engaged in their learning (i.e., finishing their homework before class, and asking questions to help their understanding). They appreciated the better opportunities for peer and teacher feedback in class. The students also perceived increased effectiveness in their use of vocabulary and essay organisation. Especially, they accorded prominence to the benefits of before-class tasks in better preparing for the lessons.

The descriptive statistics in Table 4.10 reveal the students' attitudes towards EAW throughout the FC intervention. The highest values in the three questionnaires are in bold. For ease of discussion, the

interpretation of student ratings (R) uses the same short forms as in Table 4.2: **HP** (Highly Positive), **P** (Positive), **M+/M–** (Moderate above/below), **N** (Negative) and **HN** (Highly Negative). The "*Change*" column illustrates whether the students' attitudes shifted after each phase of FC, using symbols: ⬆ rising, ⬇ falling, and (**–**) unchanged.

Table 4.10 shows that at the end of the first phase the respondents tended to be more positive about their study (except for Items 3, 8, 15 and 16), compared to the pre-questionnaire. In particular, Phase 1 witnessed a boost in student engagement, with much higher ratings regarding homework commitment (Item 5) and questioning (Item 6). The responses to the post-questionnaire suggest that students became more active in their study than before FC through completing their homework before class and asking questions to help them learn. After flipped learning, they tended to be a little more confident in their writing (Item 4). The students also perceived their vocabulary use (Item 11) and essay organisation (Item 13) to be more effective.

After Phase 2, the responses reveal that the students retained mainly positive attitudes towards Academic Writing, except for Items 1, 2, 5, 10 and 13, where post-questionnaire 1 yielded the highest results. The lower ratings after Phase 2 imply a waning trend in the students' motivation to write and their homework commitment over time. When flipped instruction was involved, the students' engagement in seeking improvements seemed to decline (Item 8).

To examine whether the differences in the students' attitudes in each phase were statistically significant, paired sample analyses were applied for pre/post questionnaires in each phase. Due to the data type (Likert scale), as well as the violation of normality assumption, Wilcoxon signed rank tests were conducted for the two paired samples - pre/post-questionnaires 1 and post-questionnaires 1 and 2 (see Appendix B.5 for details).

In Phase 1, Wilcoxon signed rank tests for pre/post-questionnaires 1 revealed significant differences when it comes to completion of homework (Item 5: $Z = 1.999, p = 0.046$), and their perceived effectiveness in terms of vocabulary (Item 11: $Z = 2.352, p = 0.019$), collocations (Item 12: $Z = 1.941, p = 0.052$), and essay organisation (Item 13: $Z = 3.127, p = 0.002$). The students tended to engage more in practice at home and noticed some improvements in lexical usage which had caused them most trouble prior to FC intervention.

Again, Wilcoxon signed rank tests were applied for the two post-questionnaires. There were clear distinctions concerning students' confidence in writing (Item 4: $Z = 2.000, p = 0.046$), essay organisation skill (Item 13: $Z = 2.236, p = 0.025$), and appreciation of before-class tasks (Item 14: $Z = 2.646, p = 0.008$). In Phase 2, the students indicated they were more confident in their writing skills and attributed their improvements to pre-class study. However, they did not perceive as much effectiveness in essay organisation as in Phase 1.

Table 4.10.
Descriptive Statistics of Students' Attitudes Towards English Academic Writing Across the Phases

Question Item	***Pre-questionnaire***		***Post-questionnaire 1***		***Change in Phase 1***	***Post-questionnaire 2***		***Change in Phase 2***
Motivation in EAW	***Mean*** *(SD)*	***R***	***Mean*** *(SD)*	***R***		***Mean*** *(SD)*	***R***	
1. I enjoy writing academic essays.	3.43 (0.68)	**M+**	**3.62** (0.87)	**M+**	–	3.38 (0.87)	**M+**	–
2. I believe writing could be of some value to me.	**4.48** (0.60)	**HP**	**4.48** (0.51)	**HP**	–	4.43 (0.51)	**HP**	–
3. I like to write even if my writing will not be graded.	3.10 (1.00)	**M+**	3.05 (0.92)	**M+**	–	**3.14** (0.91)	**M+**	–
4. I think I do pretty well in writing, compared to my classmates.	2.33 (0.86)	**M–**	2.52 (0.75)	**M–**	–	**2.70** (0.57)	**M–**	–
Engagement in EAW								
5. I always finish my writing homework before class.	3.57 (0.87)	**M+**	**3.95** (0.67)	**P**	⬆	3.76 (0.77)	**P**	–
6. During writing class, I ask questions to help me learn.	2.86 (0.96)	**M–**	3.05 (0.87)	**M+**	⬆	**3.24** (0.89)	**M+**	–
7. I feel excited about the things I learn in writing class.	3.76 (0.83)	**P**	3.95 (0.67)	**P**	–	**4.14** (0.36)	**P**	–
8. I often look for ways to improve my writing.	**3.95** (0.74)	**P**	3.81 (0.75)	**P**	–	3.90 (0.63)	**P**	–

Question Item	***Pre-questionnaire***		***Post-questionnaire 1***		***Change in Phase 1***	***Post-questionnaire 2***		***Change in Phase 2***
Perceived Effectiveness in EAW	***Mean*** *(SD)*	***R***	***Mean*** *(SD)*	***R***		***Mean*** *(SD)*	***R***	
9. My writing has improved with time.	3.48 (1.03)	**M+**	3.52 (0.51)	**M+**	–	**3.67** (0.48)	**M+**	–
10. I am able to clearly express my ideas in writing.	3.05 (0.92)	**M+**	**3.24** (0.77)	**M+**	–	3.19 (0.68)	**M+**	–
11. I know how to use VOCABULARY appropriately in my writing.	2.76 (1.00)	**M–**	3.24 (0.83)	**M+**	⬆	**3.29** (0.64)	**M+**	–
12. I know how to use COLLOCATIONS appropriately in my writing.	2.62 (0.92)	**M–**	2.95 (0.74)	**M–**	–	**3.10** (0.54)	**M+**	⬆
13. I know how to make an appropriate essay organisation.	3.33 (0.73)	**M+**	**3.95** (0.59)	**P**	⬆	3.71 (0.72)	**P**	–
14. Before-class tasks help me prepare for the lessons better.	3.76 (1.00)	**P**	4.05 (0.50)	**P**	–	**4.38** (0.50)	**HP**	⬆
15. Peers' editing helps me improve my writing.	4.10 (0.63)	**P**	3.95 (0.50)	**P**	–	**4.24** (0.54)	**P**	–
16. A teacher's feedback helps me improve my writing.	4.52 (0.68)	**HP**	4.43 (0.68)	**HP**	–	**4.57** (0.51)	**HP**	–

The previous Wilcoxon analyses show that there were some improvements in the students' attitudes in each phase; however, there is no information about the differences in levels of improvement between the two phases. To identify whether these levels of improvement were homogeneous, analyses of covariance were applied for pre/post-questionnaires 1 and post-questionnaires 1 and 2. Due to Likert scale data and the lack of normal distribution as outlined above, Rank ANCOVAs were computed to assess the students' attitudinal changes across the phases. The results indicate a significant decline in student motivation to write (Item 1: $F = 5.675, p = 0.022$), compliance to homework (Item 5: $F = 4.265, p = 0.045$), and perceived effectiveness in essay organisation (Item 13: $F = 10.593, p = 0.002$) (as displayed in Appendix B.6). Although, near the end of the course the students' commitment to homework tended to diminish, they acknowledged the role of online flipped learning in assisting with their lesson preparation (Item 14: $F = 3.793, p = 0.059$) and valued peer feedback more (Item 15: $F = 3.828, p = 0.057$).

4.5.2 Differences Between Low and High Performers

In comparing the attitudes of the students at various levels, low and high performers were taken into consideration. Table 4.11 below displays the means of each group based on a five-point Likert scale, with the largest values in bold. Across the phases, the high performers appeared to have more positive attitudes towards Academic Writing than the low performers, except for their willingness to write without assessment (Item 3). However, in Phases 2, the low performers tended to value peer feedback (Item 15) and teacher feedback (Item 16) a little more than the high performers. After the FC, both groups had more positive attitudes towards AW than prior to the study (as highlighted in the table).

Table 4.11.
Descriptive Statistics for EAW Attitudes of Low and High Performers

Question Item		Pre-questionnaire	Post-questionnaire 1	Post-questionnaire 2
Motivation in EAW				
1. I enjoy writing academic essays.	Low	3.30	**3.40**	3.10
	High	3.55	**3.82**	3.64
2. I believe writing could be of some value to me.	Low	**4.40**	4.30	4.30
	High	4.55	**4.64**	4.55
3. I like to write even if my writing will not be graded.	Low	**3.20**	**3.20**	**3.20**
	High	3.00	2.91	**3.09**
4. I think I do pretty well in writing, compared to my classmates.	Low	2.30	2.40	**2.56**
	High	2.36	2.64	**2.82**
Engagement in EAW				
5. I always finish my writing homework before class.	Low	**3.60**	**3.60**	3.40
	High	3.55	**4.27**	4.09
6. During writing class, I ask questions to help me learn.	Low	2.40	2.70	**2.80**
	High	3.27	3.36	**3.64**
7. I feel excited about the things I learn in writing class.	Low	3.70	3.70	**4.10**
	High	3.82	**4.18**	**4.18**

Question Item		Pre-questionnaire	Post-questionnaire 1	Post-questionnaire 2
8. I often look for ways to improve my writing.	Low	**3.90**	3.70	**3.90**
	High	**4.00**	3.91	3.91
Perceived Effectiveness in EAW				
9. My writing has improved with time.	Low	3.10	3.30	**3.60**
	High	**3.82**	3.73	3.73
10. I am able to clearly express my ideas in writing.	Low	2.70	**2.90**	2.70
	High	3.36	3.55	**3.64**
11. I know how to use VOCABULARY appropriately in my writing.	Low	2.60	**3.10**	**3.10**
	High	2.91	3.36	**3.45**
12. I know how to use COLLOCATIONS appropriately in my writing.	Low	2.60	2.90	**3.10**
	High	2.64	3.00	**3.09**
13. I know how to make an appropriate essay organisation.	Low	3.30	**3.80**	3.50
	High	3.36	**4.09**	3.91
14. Before-class tasks help me prepare for the lessons better.	Low	3.90	4.00	**4.20**
	High	3.64	4.09	**4.55**
15. Peers' editing helps me improve my writing.	Low	4.00	3.80	**4.30**
	High	**4.18**	4.09	**4.18**
16. A teacher's feedback helps me improve my writing.	Low	4.30	4.40	**4.60**
	High	**4.73**	4.45	4.55

(The highlighting indicates growth)

To find more information about the differences in level of improvements between the low and high performers in each phase, Rank ANCOVAs were employed for pre/post-questionnaires 1 as well as post-questionnaires 1 and 2. The statistical analyses reveal that the low performers seemed to be less dedicated to homework (Item 5: $F = 10.620, p = 0.004$) in Phase 1, and to perceive themselves less effective in idea expression (Item 10: $F = 9.712, p = 0.006$) in Phase 2 than the high performers (see details in Appendix B.7).

For further analyses, Rank ANCOVAs were conducted for each level across the phases. The low performers tended to become more excited to learn (Item 7: $F = 5.921, p = 0.026$), more active in their study (Item 8: $F = 4.235, p = 0.054$), and perceived peer editing to be more effective (Item 15: $F = 5.179, p = 0.035$) than they did before FC. However, they perceived essay organisation to be less effective in Phase 2 than in Phase 1 (Item 13: $F = 4.955, p = 0.039$). There was no significant difference in the high performers' attitudes to AW across the phases, except that they also perceived essay organisation to be less effective in Phase 2 (Item 13: $F = 5.007, p = 0.037$) (see Appendix B.8 for details). These findings indicate that the low performers appeared to benefit more from the FC approach than the high performers. FC tended to foster better learning motivation and engagement of the low performing students.

To gain a better understanding of the effects of the students' online learning engagement, the next sub-section will focus on the attitudinal changes of the six students of different online engagement.

4.5.3 Differences Among Consistent, Partial Users and Non-Users

In regard to the students who represented the three groups of use-frequency, of particular note was a correlation between their online engagement and higher positive attitudes toward the writing subject. After FC, the regular online learners reported being motivated to learn, and perceived essay organisation and vocabulary use to be more effective. The non-users of online materials, although valuing the benefits of FC more over time, perceived little writing progress. These findings are outlined below.

4.5.3.1 Consistent Users: Mai and Huu. Before the FC, Mai and Huu were both accustomed to online learning and self-equipped with a laptop and a smartphone (as stated in the pre-questionnaire). During the first phase, they both participated in all the FC activities, including watching video lectures and doing the online tasks.

From Mai's responses to the pre-questionnaire, it was noted that she was not confident in her writing and tended not to engage substantially in class (negative ratings for Items 4 and 6). However, she was motivated to write without assessment, compliant with homework, and excited about learning (positive ratings for Items 3, 5 and 7).

In terms of online engagement in Phase 1, Mai was dedicated to watching the videos, with multiple logins captured by Edpuzzle. Although at first she had difficulty logging in to view the videos, she appreciated that she could review the lessons multiple times for better understanding:

- Mai: *The video lectures are quite detailed and stick with the course content. A satisfying thing is that I can review the lessons to understand better. The teacher provides students with lots of knowledge* [post-questionnaire 1].

After Phase 1, Mai tended to enjoy writing more (Item 1: positive) and perceived herself to be more effective in idea expression (Item 10: positive), lexical usage (highly positive ratings for Items 11 and 12), and teacher feedback (Item 16: highly positive).

Based on the pre-questionnaire, Huu, a high achiever, appeared to be more confident in writing than Mai (neutral rating for Item 4) and to engage more in class (positive ratings for Items 5, 7 and 8). After Phase 1, Huu's motivation and engagement did not change much. He reported having trouble understanding some academic words and needed to translate the online content:

- Huu: *Sometimes there are academic words, so I can't fully understand the lessons* [post-questionnaire 1].

What Huu admitted to liking about the FC was the abundance of activities that gave him the opportunity for intensive learning and more in-class practice. He said good time management could enable him to do all the online tasks:

- Huu: *I have to manage time well so as not to miss any lessons before class. Missing a lesso*n [weekly videos and online tasks] *may result in not understanding it well* [post-questionnaire 1].

In Phase 2, both Mai and Huu remained active online with all videos viewed and tasks completed. From their responses to the last questionnaire, they indicated no difficulty in online learning. They still perceived the effectiveness of essay organisation (Item 13: positive), the benefits of before-class tasks (Item 14: positive/highly positive), and of peer feedback (Item 15: positive/highly positive) and teacher feedback (Item 16: positive/highly positive). Mai noticed her own improvements in writing (Item 9: positive) and seemed to be a little more confident (Item 4: neutral) after FC.

4.5.3.2 Partial Users: Thanh and Trong. Thanh and Trong had no previous experience in online learning and were considered partial users because of their irregular participation in online activities. Thanh completed only two out of the five online activities near the end of Phase 1 but completed all the three tasks in Phase 2. She encountered difficulties with using her smartphone and her own lack of vocabulary, thus she stopped watching the videos. She found it time-consuming to do the Moodle tasks on her phone:

- Thanh: *I'm short of vocabulary. Also, I have to spend much time* [3–4 hours] *doing online exercises because I can only use smartphone* [post-questionnaire 1].

Prior to FC, Thanh was neither motivated to write (neutral ratings for Items 1, 3 and 4) nor engaged much in class (Item 6: negative, Items 7 and 8: neutral), and she perceived herself to have little effectiveness in idea expression (Item 10: highly negative) and vocabulary (Item 11: negative). After FC, she seemed to become more interested in the things she learned in class (Item 7: positive) and realised the value of before-class tasks for better preparation (Item 14: positive):

- Thanh: *I actively participate in group work and games in a flipped classroom* [post-questionnaire 2].

At the end of the study, Thanh was more convinced about her progress in lexical use (Item 11: positive).

Trong, another partial user, missed two videos in Phase 2 and failed to do five online activities in both phases. He claimed that he did not have enough time to complete all the tasks and preferred watching the videos:

- Trong: *The video content is easy to understand. It's a chance for me to prepare for the new lessons and review the previous ones. After watching the videos, I can participate more in in-class activities. We can work together and fix each other's mistakes* [post-questionnaire 2].

Before FC, Trong indicated he was motivated to learn (positive ratings for Items 1-3), but he was not confident about his writing (Item 4: highly negative) and lexical use (Items 11 and 12: negative). After FC, he tended to engage more in asking questions (Item 6: positive) and look for ways of improvement

(Item 8: highly positive). He perceived some progress in his essay organisation (Item 13: positive), but not much progress in lexical use (Items 11 and 12: neutral).

4.5.3.3 Non-Users: Ngoc and Tien. Ngoc and Tien were considered non-users of online materials, with only one of the viewing activities done by Tien at the beginning of the intervention. They were among the four students who had only smartphones for online study. In Ngoc's responses to the open-ended questions, she explained her difficulty logging in to watch the videos. For Tien, viewing videos and doing tasks on his phone were not a pleasant experience:

- Tien: *My eyes are sometimes tired. I understand the ideas, but I can't hear all the words in the videos* [post-questionnaire 1].

Before FC, both of them were motivated to learn (Items 1 and 3: positive), but they were not dedicated to homework completion (Item 5: negative/neutral). Throughout the intervention, they tended to engage more in class (positive ratings for Items 6-8). However, there was no change in their confidence in writing (neutral ratings for Item 4 in all the questionnaires). At the end of the study, Tien did not notice much writing progress (Item 9: neutral), while Ngoc perceived herself to be less effective in idea expression and vocabulary (Item 10 and 11: neutral) in Phase 2 than in Phase 1.

The next section illustrates how the students perceived FC across the two phases, with a focus on students of different academic profiles and use-frequency profiles.

4.6 Students' Perceptions of Flipped Learning

In order to explore the students' attitudes to flipped learning, in the questionnaires after Phase 1 (Week 9) and Phase 2 (Week 14) the students were asked to rate their experiences. Their comments from the open-ended questions in the questionnaires and the focus-group interview in Week 14 assisted in generating a deeper understanding of their perceptions.

4.6.1 Students' Perceptions of Flipped Learning Across the Phases

Prior to the application of the flipped instruction, the students had experienced traditional writing courses where in-class lectures focused on theory, and most writing practice was done at home. The conclusion of the first five weeks of the FC intervention (Phase 1) presented a good opportunity for the researcher to examine the students' initial reactions to FC with a questionnaire about their satisfaction with the learning program. To track any changes in the students' perceptions, an identical questionnaire about their flipped learning satisfaction was administered after another five weeks (Phase 2). It should be noted that Items 2, 4, 6 and 7 are negative questions for FC. The means and interpretation of ratings (see Table 4.2 for the ranges) in Table 4.12 (with the higher values in bold) convey little change in the students' perceptions of FC. The "*Change*" column illustrates whether their attitudes shifted after Phase 2 of FC, using symbols: ⬆ rising, ⬇ falling, and (–) unchanged.

Table 4.12.
Descriptive Statistics of Students' Perceptions of Flipped Learning Across the Phases

Question Item	***Post-questionnaire 1***		***Post-questionnaire 2***		***Change in Phase 2***
	Mean *(SD)*	***Rating***	***Mean*** *(SD)*	***Rating***	
1. Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom.	**3.71** (0.72)	**P**	**3.71** (0.72)	**P**	–
*2. I feel I am more in charge of my learning in a **TRADITIONAL** classroom.*	**2.95** (0.74)	**M–**	**2.95** (0.67)	**M–**	–
3. I participate more in the flipped classroom activities than in traditional classrooms.	3.86 (0.73)	**P**	**4.00** (0.45)	**P**	–
*4. I **DO NOT** enjoy flipped classrooms.*	**2.33** (0.73)	**M–**	1.90 (0.77)	**N** (*i.e., Positive about FC*)	↑
5. I think the online videos/materials guide me toward better understanding of the course topics.	**4.05** (0.50)	**P**	3.95 (0.50)	**P**	–
*6. I prefer **TRADITIONAL** lectures in class to video lessons at home.*	**2.86** (0.85)	**M–**	2.62 (0.67)	**M–**	–
*7. I feel the flipped instruction **DOES NOT** help my learning.*	**1.95** (0.87)	**N**	1.71 (0.64)	**N**	–
8. The flipped classroom facilitates more communication between me and my teacher.	3.43 (0.75)	**M+**	**3.52** (0.68)	**M+**	–
9. The flipped classroom facilitates more communication between me and my classmates.	3.76 (0.83)	**P**	**3.86** (0.57)	**P**	–
10. Generally, I am happy and satisfied with the flipped learning experience.	4.00 (0.45)	**P**	**4.24** (0.54)	**P**	–

The data from the questionnaire regarding Phase 1 reveal that the students were positive about the appropriate use of classroom time under a flipped approach in comparison with a traditional one (Item 1). They tended to participate more (Item 3) and valued more highly the role of videos/materials in understanding the lessons (Item 5). They also indicated that they engaged more in peer interaction (Item 9) and were satisfied with the flipped learning experience (Item 10). Although at this stage the students remained unsure about their preferences for a traditional approach and lectures (Item 6), they acknowledged the benefits of flipped instruction (Item 7) when asked if they found FC of any benefit.

At the conclusion of Phase 2, the students' ratings remained consistent. The highlighting in Item 4 signifies a positive shift in their ratings for FC enjoyment. The students indicated that they preferred a flipped classroom to a traditional classroom because the former provided them with more effective use of class time (Item 1), better understanding of the lessons (Item 5), and more communication with the teacher (Item 8) and with classmates (Item 9). They perceived that they participated more in the FC activities than would be the case in a traditional approach (Item 3). After FC intervention, a sense of satisfaction was apparent in students' responses (Item 10).

Interestingly, while Bruff et al. (2013) reported more student control in an FC, Item 2's neutral responses convey a sense that the students still felt in charge of their learning in a traditional classroom because they could choose their own learning materials. Otherwise, in an FC, the learning materials were already chosen for them and posted online.

Wilcoxon signed rank tests are used to compare two paired samples in a pre/post-test design, so they were applied here to elaborate on the findings. Wilcoxon tests for the two questionnaires indicate that there was a significant difference in the students' enjoyment of FC (Item 4: $Z = 2.066, p = 0.039$), which implies their more positive attitude after 10 weeks of FC application (see Appendix B.9 for details).

These statistics align with student comments from the open-ended questions and extended responses from the focus-group interview. Five students (Students A4, A12, A13, A20 and A21) voluntarily participated in the interview that lasted nearly one hour. As noted from the pre-questionnaire, half of the class (11 students) came to this intervention with little experience of online learning. Among the interviewees, Student 13 was the only one who had heard about FC as a way of self-study when he was in high school. The other interviewees had no knowledge of flipped classroom ("lớp học đảo ngược", in Vietnamese, a classroom model which reverses the typical elements of lecture and homework) until this research. Looking more closely at these comments to understand what students valued in their experiences revealed the following five themes:

4.6.1.1 Learning Materials. Video lectures were made available for the students to watch and re-watch, and online tasks were designed for the students' self-practice. They noticed the quality and usefulness of the online materials:

- *I can understand the lessons before class. After watching the videos, I can do the exercises* [A5, post-questionnaire 1].
- *Every piece of materials on LMS [Learning Management System] helps me improve lots of writing skills, especially "patterns of organisation"* [A12, post-questionnaire 2].

The students' further experiences with FC in Phase 2 consolidated their positive attitudes from Phase 1 about the ease of accessibility and availability of online materials:

- *The lectures are available online and can't be lost, so I can rewatch when needed. The teacher provides lots of websites for my study and practice* [A10, post-questionnaire 2].

According to the focus group interviewees, the use of video lessons on its own was a motivating aspect, as they could watch the videos multiple times, pause, and rewind as needed. All five interviewees agreed that watching videos beforehand made them feel more confident when dealing with the issues in class.

Moreover, the students appreciated the access to multiple online sources, beyond those that the teacher would typically use in the traditional lecture format. Among the videos posted, Student A20 particularly enjoyed the vocabulary video clip by a native English speaker, thinking that it helped her memorise the expressions better than with handouts. Student A21 was most attracted to the TED-Ed video How To Write Descriptively because of its vivid animations and special effects.

Although caution had been taken in the choice of online materials, there were still complaints about workload:

- *Sometimes homework is too much (too many words and content)* [A14, post- questionnaire 1].
- *Some lessons use words that are hard to understand. Sometimes, there are too many exercises and resources, so I can't complete them all* [A17, post-questionnaire 1].

Student A21 also recounted being confused by some embedded questions. However, he conceded that his trouble was mostly due to his reluctance to research further. When the interviewees were asked if they were overloaded by the online activities, Students A13 (a consistent user) and A21 (a partial user) said that they actually had more exercises in the previous writing course. From their comments, workload seemed not to be an issue of FCs, but the difficulties might lie in the fact that the students had to figure out the tasks themselves, and some online sources were not tailored to the students.

4.6.1.2 Opportunity for Self-Regulation. Self-regulation has been found fundamental to the success of an FC (Shih et al., 2019), and this was an issue students mentioned in this study. They expressed satisfaction with the flexibility of the mode and opportunity for self-management:

- [An advantage is] *training in self-study skill* [A18, post-questionnaire 1].
- *I can be in charge of study time and be able to rewatch lectures* [A6, post-questionnaire 2].
- *This class helps me become more in charge of my learning* [A11, post-questionnaire 2].

However, not all students found the transition to the new teaching mode a smooth one. Student 13 described his bewilderment during the transition from a traditional classroom to an FC, as he was not used to taking charge of his study. However, he later felt more oriented in an FC:

- *Knowing what to learn and what to prepare before class helps me understand the lessons better* [A13, interview].

Other interviewees also found that the FC drove them to engage more and study harder, compared to a traditional classroom:

- *I'm often too lazy to read the textbook before class. A flipped classroom is more effective for me. I MUST prepare for the lesson, so I have an overview of what will be focused on in class* [A12, interview].

- *I have become more active and participated in more activities in a flipped classroom rather than sit and write quietly in a traditional classroom* [A20, interview].

Despite having more control of their study, some students wanted more online interaction and feedback, which could be understood as external regulation.

4.6.1.3 Amount and Quality of Interaction and Feedback. Interaction provides language learners with opportunities for comprehensible input and feedback (Gass, 1997; M. H. Long, 1996; Pica, 1994). In-class sessions in an FC were reported to offer the students more group work and more quality time with their teacher and classmates:

- *There is lots of group work, which gives me more chance to interact with friends, and the teacher spends more time giving feedback* [A4, post-questionnaire 1].
- *I can interact with friends, participate in class activities, and exchange ideas* [A3, post-questionnaire 2].

When asked which learning mode offered more chance for interaction, Student A13 shared that it might depend on students' characteristics:

- *I think, to articulate students, the amount of interaction with the teacher will be the same if they're in a traditional or a flipped classroom. However, to reserved students, a flipped classroom gives them more chance to talk to the teacher. They're often more confident to discuss with the teacher after a careful preparation* [A13, interview].

The opportunity for more interaction with the teacher and peers in an FC was also noted by Student A20. Because students already had the input before class, they could spend more time working with the ideas in class:

- *When we have had an overview of the lesson before class, we can actively participate in group work discussing [for example] essay outlines. We can listen and learn from each other's ideas and feedback. The teacher often walks around and gives each group comments on how to improve. In a traditional classroom, we may be too shy to ask the teacher questions or discuss with friends* [A20, interview].

Although the students had further opportunities for interactions in class, they still expressed a desire for more interactive online activities between humans and humans, not between humans and online content:

- *The teacher should interact* [online] *with students more* [A10, post-questionnaire 2].

Some students said they did not have enough direction and feedback from the teacher when they learned

online:

- *I hope that the teacher can correct my mistakes right after I have finished the exercises* [A18, post-questionnaire 2].
- *I am not satisfied with the fact that online essays are not marked weekly so that students know and fix their mistakes* [A17, post-questionnaire 2].

Due to their familiarity with a teacher-regulated approach, students might have found it difficult to rely on self-evaluation.

When asked about feedback, Student A13 expressed appreciation for the opportunity for peer editing in class and online because he could read his friends' essays and learn from their ideas and mistakes. However, two interviewees mentioned being quite disappointed that they could not immediately ask a question when at home watching a lesson video or doing online tasks. The discussion forum was rarely used as the students who had enquiries tended to ask their classmates before directing the questions to the teacher. When asked why they did not pose questions in the forum, Student A21 admitted:

- [We are] *afraid of silly questions, and others will laugh* [at us] [A21, interview].

Flipped instruction can pose both opportunities and challenges for learning. In an FC, technology can support and, in some cases, get in the way of pedagogy.

4.6.1.4 Technological Use. FC approaches combine pedagogy and learning technologies to promote student learning opportunities, so student interactions with technology are indispensable. The students considered this kind of FC an opportunity to become more knowledgeable about technology:

- *I use technology more and get more acquainted with it* [A11, post-questionnaire 1].

Student A7 was able to link how the technology could help her to improve her writing:

- *I know more ways of learning such as apps, video lectures, activities to improve writing* [A7, post-questionnaire 2].

Although the students were given one week to acclimatise to new technical applications (such as Moodle and Edpuzzle) along with in-class guidance, problems still arose, which might have been intimidating to first-time users:

- *I have to download the app* [at no cost] *to watch the videos on my smart phone, which is time and space consuming. Sometimes, I fail to log in* [A5, post-questionnaire 1].
- *There are some exercises I can't do on the phone. I hope that all the tasks will be made accessible on the phone, which is more convenient* [A19, post-questionnaire 2].

Some of the language of online operations proved an impediment to accessing learning resources. Student A4 reported in the interview her difficulty in following online instructions. She did not understand some task requirements such as the Drag and Drop activity on Moodle, so she failed to do the tasks correctly. She also added that it might be hard to do this kind of activity on a phone because it involved navigating a long passage, which was unfriendly to screen readers.

According to the interviewees, the main impediment was Internet access since not all students had Internet connection at home and some lacked a stable Internet connection:

- *This is not good for students who have no computers, no Internet, and no time* [A3, post-questionnaire 2].

To some students, logging in to watch the videos was quite complicated and time-consuming. Student A4, when reflecting on her initial experience, commented that it would be discouraging to log in the next time if it failed on the first attempt.

4.6.1.5 Perceived Effectiveness. After experiencing FC for 10 weeks, the students perceived improvements in their language skills through a variety of activities:

- *I can improve my writing skill thanks to online materials such as collocations* [A12, post-questionnaire 1].
- *Besides writing skills, I can practise listening skills when watching the videos. This helps improve myself as my listening skill is still low* [A15, post-questionnaire 2].

Student A13 was somewhat worried about initial application of FC in Phase 1:

- *This is a new experience, and we need time to adapt* [A13, post-questionnaire 1].

His comments after Phase 2 demonstrated a growing confidence in the effectiveness of FC:

- *The most success of a flipped classroom is to turn a quite boring course like Writing into videos, via which we can learn effectively* [A13, interview].

In general, the students' responses indicated that being better prepared for the lessons before class (via lecture videos and online tasks) led to improved comprehension and interactions in class. This instructional design provided them with a positive learning environment, thus motivating them to be more active and engaged in the writing process. At the end of the study, some students noticed their growth in autonomous learning.

4.6.2 Differences Between Low and High Performers

Going back to the attitudes of the students of different levels, in most respects the high performers held a stronger preference for FCs over traditional classroom than the low performers. The mean scores

of their ratings in the two post-questionnaires are shown in Table 4.13. The data reveal that the rates of perception change between the two questionnaires were somewhat greater in the low performers than the high performers. To examine whether those differences were statistically significant, Rank ANCOVAs were applied and represented by F statistics and p-values in the table. However, there was no significant difference in their perception change between the two phases (with all p-values greater than 5%).

Table 4.13.
Rank ANCOVAs for FC Perceptions of Low and High Performers

Question Item		***Post-questionnaire 1***	***Post-questionnaire 2***	***F***	***p-value***
1. Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom.	Low	3.50	3.60	0.087	0.772
	High	3.91	3.82		
*2. I feel I am more in charge of my learning in a **TRADITIONAL** classroom.*	Low	3.10	2.90	0.751	0.397
	High	2.82	3.00		
*3. I participate more in the flipped classroom activities than in **TRADITIONAL** classrooms.*	Low	3.90	4.00	0.001	0.977
	High	3.82	4.00		
*4. I **DO NOT** enjoy flipped classrooms.*	Low	2.40	2.20	2.919	0.104
	High	2.27	1.64		
5. I think the online videos/materials guide me toward better understanding of the course topics.	Low	3.90	3.90	0.021	0.887
	High	4.18	4.00		
*6. I prefer **TRADITIONAL** lectures in class to video lessons at home.*	Low	3.00	2.70	0.073	0.791
	High	2.73	2.55		
*7. I feel the flipped instruction **DOES NOT** help my learning.*	Low	2.20	1.80	0.006	0.938
	High	1.73	1.64		
8. The flipped classroom facilitates more communication between me and my teacher.	Low	3.70	3.80	0.645	0.432
	High	3.18	3.27		
9. The flipped classroom facilitates more communication between me and my classmates.	Low	4.10	4.00	0.396	0.537
	High	3.45	3.73		
10. Generally, I am happy and satisfied with the flipped learning experience.	Low	4.20	4.20	0.043	0.837
	High	3.82	4.27		

(The highlighting indicates growth)

While the class as a group showed enjoyment in the FC, the low performers were lower in their enjoyment than the high performers (Item 4). The low performers tended to be more neutral about their preference for traditional lectures (Item 6). However, the low performers appreciated the opportunity for interaction with teachers (Item 8) and peers (Item 9) in an FC more and felt more satisfied with flipped learning experiences (Item 10) than the high performers. At the end of the study, the low performers held more positive attitudes towards FCs than they previously felt (as highlighted in Table 4.13).

4.6.3 Differences Among Consistent, Partial Users and Non-Users

In order to examine the perceptions of different users of online activities, the data from the six focus students were analysed. Together with data from the questionnaires, the qualitative information from these students' responses to the open-ended questions re-affirmed their overall satisfaction of flipped learning.

4.6.3.1 Consistent Users: Mai and Huu. Mai and Huu had been actively participated in online activities since the beginning of the FC intervention and had quite similar perceptions of FC at the end of the study. Across the phases, Mai said she participated more in FC activities and understood the lessons better than in a traditional classroom (positive ratings for Items 3 and 5). While she had moderate ratings for FC enjoyment (Item 4) and FC benefits (Item 7) in Phase 1, her ratings in Phase 2 tended to be more positive for FC (Items 4 and 7):

- Mai: *I know more ways of learning such as apps, video lectures, activities to improve writing. The teacher is very dedicated to preparing the videos and activities for students* [post-questionnaire 2].

After Phase 2, Mai was satisfied with the effective use of class time (Item 1: positive) and flipped learning experiences (Item 10: highly positive). However, she was still neutral in her preference for traditional and video lectures (Item 6) and did not perceive differences in terms of interaction (Items 8 and 9: neutral). She reported that she would value the teacher spending time explaining the lessons and online exercises before each in-class session.

Huu, on the other hand, perceived the effectiveness of FC from the first stage of intervention in terms of class time use (Item 1: positive), participation (Item 3: positive), enjoyment (Item 4: positive about FC), comprehension (Item 5: positive) and benefits (Item 7: positive about FC):

- Huu: *I'm provided with more reference materials, more tasks to improve writing. I don't have to spend too much class time on theory but have more practice instead* [post-questionnaire 2].

Huu's perceptions in the second stage changed little, as indicated in his similar ratings. In spite of his overall satisfaction with an FC (Item 10: positive), he did not perceive himself to be more in charge of learning (Item 2: neutral) than in a traditional classroom. To Huu, FC did not induce more interactions with the teacher (Item 8: negative) or his peers (Item 9: neutral):

- Huu: *I would prefer more interactive online activities* [post-questionnaire 2].

The responses of both of these consistent users highlight the need to incorporate more online interaction in order to sustain students' interest in learning.

4.6.3.2 Partial Users: Thanh and Trong. Thanh and Trong, despite their irregular engagement with online activities, appeared to be satisfied with the amount of interaction (positive ratings for Items 8 and 9) and flipped learning experience (Item 10: positive). Both acknowledged the benefits of FC (Item 7: positive about FC) and reported enhanced engagement (Item 3: positive) and better understanding (Item 5: positive):

- Thanh: *I am provided with lots of grammar and vocabulary practice, and more interaction with my peers* [post-questionnaire 1].
- Trong: *I use my time more effectively thanks to the videos and the embedded questions. Besides, in-class activities also arouse my curiosity and creativity* [post-questionnaire 2].

However, Thanh did not perceive herself to be more in charge of learning in the FC (Item 2: neutral). Her frustration with learning online via phone might have resulted in her moderate ratings for FC enjoyment (Item 4) and video preference (Item 6). Trong, despite perceiving more effective use of class time in an FC (Item 1: positive), was also unsure about his preference for video lectures (Item 6: neutral).

4.6.3.3 Non-Users: Ngoc and Tien. Ngoc and Tien attended the in-class sessions but did not engage in the online activities. Across both phases, they did not discern any effectiveness in the use of class time in an FC (moderate rating for Item 1). They had not participated more in the FC (Item 3: neutral) and were neutral about FC enjoyment (Item 4). Part of their disengagement with the mode might be due to their stated preference for greater interaction:

- Ngoc: *There is not much online interaction between teacher and students* [post-questionnaire 1].
- Tien: *I think interaction between students and students is still not enough. Online activities should be more interactive, more competitive, and use fewer words* [post-questionnaire 2].

While the online activities in the FC tended to induce more collaboration rather than competition among the students, students like Tien, however, might be motivated to work harder if they were involved in competitive activities.

In Phase 2, Ngoc and Tien acknowledged the benefits of FC more than they did in Phase 1 (positive ratings for Items 8, 9 and 10). Tien seemed to value the online resources more, while still not doing the online tasks:

- Tien: *It's a new experience of the classroom. Online materials are quite useful* [post-questionnaire 2].

While Tien was neutral about his preference for lecture types (Item 6), Ngoc indicated that she preferred traditional lectures (Item 6: positive). Her comment was, in fact, related to technological issues, not pedagogical ones:

- Ngoc: *I have some difficulty logging in to watch the videos. In-class lectures are more convenient to me* [post-questionnaire 2].

As indicated previously, most of the students fell into the groups of consistent (10 students) and partial users (nine students); there were only two non-users of online materials. Despite some unsatisfying aspects of FC, such as technological issues and lack of online interaction, the students, regardless of their use-frequency, appreciated the new learning opportunity and perceived its effectiveness in promoting participation and comprehension.

4.7 Students' Achievements

The preceding sections have provided an overview of online and in-class activities conducted in the FC, as well as the students' perceptions. This section analyses the students' writing achievements throughout the intervention. In order to gauge the students' improvement in their learning, four writing pre/post-tests in two types of essays were analytically scored (see Table 4.14).

Table 4.14.
Writing Pre/Post-Tests Across the Phases

Phase 1	Test 1	Pre-test of comparison essays
	Test 2	Post-test of comparison essays
Phase 2	Test 3	Pre-test of classification essays
	Test 4	Post-test of classification essays

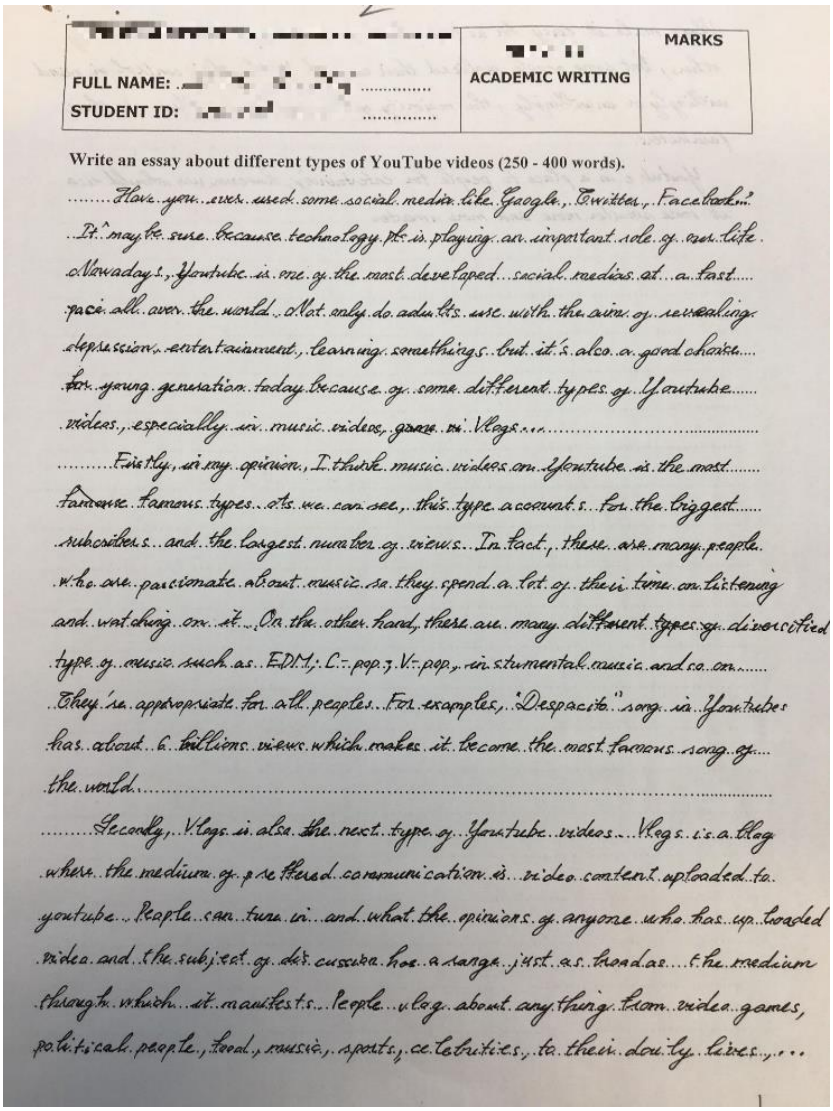
Figure 4.3 is an image of a student essay showing how a classification topic was given at the beginning of Phase 2 and what student's writing looked like.

As outlined in Section 3.8 of the Methodology chapter, four subskills were assessed to measure student writing achievements: *task addressing; coherence and cohesion; lexical resource*; and *grammatical range and accuracy*. These were also explicitly addressed through FC activities. Each subskill was scored from 0 to 10 so that the scores matched the performance described in the course's standardised writing rubric (adapted from IELTS Task 2 Writing band descriptors, see Appendix A.2). The overall score is the average of these four component scores.

To ensure objectivity and consistency, the researcher, together with a qualified and experienced EFL teacher, marked the students' essays. The Cohen's kappa statistics that indicate interrater reliability found a strong agreement, with results ranged from 0.848 to 1.000 (see Appendix B.10 for details).

To reveal more about the students' lexical progress throughout FC intervention, Text Inspector (Bax, 2012), a professional web tool, analysed the types (the number of different words) and tokens (the total number of words) in the students' essays. As indicators of high-quality writing, three linguistic features were investigated:

Figure 4.3.
Student A2's First Classification Essay (Test 3)



FULL NAME: .....
STUDENT ID: .....

ACADEMIC WRITING

MARKS

Write an essay about different types of YouTube videos (250 - 400 words).

.....Have you ever used some social media like Google, Twitter, Facebook?
It may be sure because technology plays an important role of our life.
Nowadays, Youtube is one of the most developed social medias at a fast
pace all over the world. Not only do adults use with the aim of revealing
depression, entertainment, learning somethings but it's also a good choice
for young generation today because of some different types of Youtube
videos, especially in music videos, game vs Vlogs.....
.....Firstly, in my opinion, I think music videos on Youtube is the most
famous famous types of it's we can see, this type accounts for the biggest
subscribers and the largest number of views. In fact, there are many people
who are passionate about music as they spend a lot of their time on listening
and watching on it. On the other hand, there are many different types of diversified
type of music such as EDM, C-pop, J-pop, instrumental music and so on.....
They're appropriate for all peoples. For examples, "Despacito" song in Youtubes
has about 6 billions views which makes it become the most favours song of
the world.....
.....Secondly, Vlogs is also the next type of Youtube videos. Vlogs is a blog
where the medium of pre-recorded communication is video content uploaded to
youtube. People can tune in and what the opinions of anyone who has uploaded
video and the subject of discussion has a range just as broad as the medium
through which it manifests. People vlog about anything from video games,
political people, food, music, sports, celebrities, to their daily lives,...

- *Academic words* were counted based on the Academic Word List (Coxhead, 2000).
- *Academic phrases* were counted based on the Phrasal Expressions List (Martinez & Schmitt, 2012).
- *Metadiscourse markers* were counted; these included logical connectives (*however, therefore*, etc.), sequencing items (*first, next, then*, etc.), and hedges (*might, perhaps, possibly*, etc.) (Hyland, 2004).

What follows is a detailed account of student achievements in terms of the four subskills and, in particular, lexical resource.

4.7.1 Achievements in the Subskills of Writing

Across the FC phases, students made progress in the four subskills of writing. These subskills are:

(**1**) Task addressing,

(**2**) Coherence and cohesion,

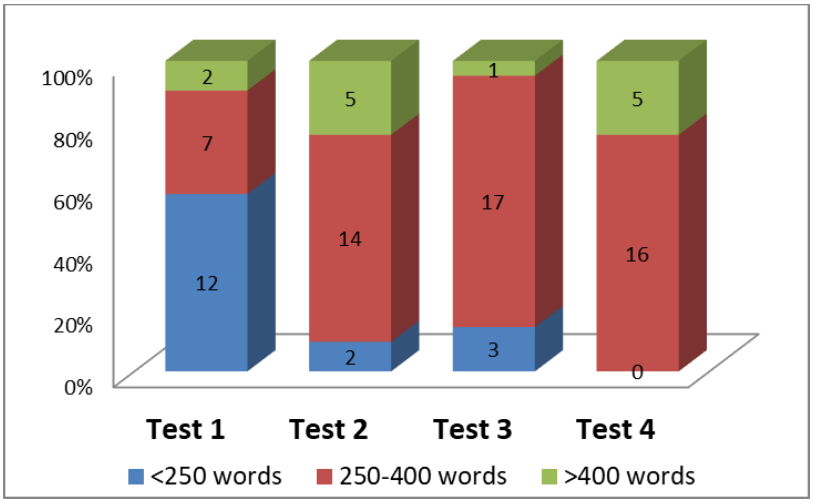
(**3**) Lexical resource, and

(**4**) Grammatical range and accuracy.

A close investigation into each facet is presented below, together with some examples of achievements identified in various students' essays.

4.7.1.1 Task Addressing. *Task addressing* (similar to IELTS *task response*) relates to how students address the requirements of the task and develop arguments in relation to the given topic. As part of the fulfilment of the criteria of *task addressing*, students were expected to fulfil the minimum word limit of 250; there was no penalty for exceeding 400 words. As in a study by Leis et al. (2015), word count was examined to understand how students were able to marshal linguistic resources to address the tasks. As shown in Figure 4.4, at the beginning of the study (Test 1), 12 students could not meet the required word threshold of 250 words. However, they could address the tasks more comprehensively across the FC phases.

Figure 4.4.
Word Count Across the Tests



The data show that the students' essays became longer, particularly at the end of each phase (Tests 2 and 4). It is worth noting that the students were on task and the increase in word count resulted from more fully developed ideas. The only students to produce short essays in Test 2 were Students 6 and 14 (see Appendix B.12), who did not engage with online activities in Phase 1.

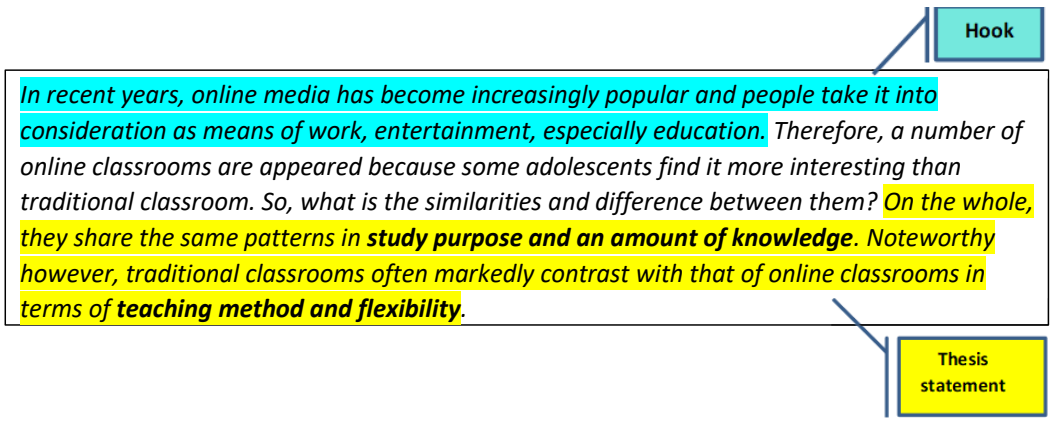
By the end of the FC intervention, all students achieved the word threshold of 250 words. Moreover, there was an increase in long essays, with five essays of more than 400 words. The students who performed best in terms of total word use in both post-tests (Tests 2 and 4) were Students A1, A11, A20 and A21, who were consistent or partial users of online learning resources. They seemed to have sufficient resources in English to sustain longer pieces of writing.

Overall, the essays' organisational forms addressed the lesson instructions to create essays in three parts: introduction, body, and conclusion. One of the main areas to help the students address the tasks was the introduction, which sets the essays off on the right foot. A discourse element they were taught to use within the introduction was the use of "hooks". Videos, handouts and online tasks about how to write an introduction using hooks gave students the opportunity to build knowledge before the class began. In the first teaching phase, the students had access to online resources that modeled hooks, such as questions, or interesting pieces of information to catch the reader's attention at the beginning of the essay.

The students were also taught to use a clear thesis statement at the end of the introductory paragraph to give the reader a clear idea of what will be discussed in the body of the essay. In subsequent class sessions, they had opportunities to write the introductions individually for feedback from their peers and the teacher (see Week 4 schedule, Appendix A.1).

An example of how the students used both the hook and thesis statement can be seen in Student A12's final comparison essay (Figure 4.5). Her hook (as highlighted blue in the text) states a broad observation before moving to a specific topic of online education. She used similarities "*study purpose and an amount of knowledge*" and differences "*teaching method and flexibility*" to explicitly signpost the points of comparison within her thesis statement (highlighted yellow).

Figure 4.5.
Student A12: Final Comparison Essay (Test 2)



In fact, by tracking another student's progress, it is possible to see how this particular skill was developed over time. When comparing the introductions of Student 18's Tests 1 and 2 (Table 4.15), both have hooks and thesis statements, but the second one is longer, with the thesis indicating the points of comparison "*quality of lesson*" and "*interaction with classmates*".

In Student A18's Test 3, she still used the hook, even though she was not yet able to use the language associated with classification because it had not been taught. However, in the opening of her Test 4, she used the thesis to classify television programs (based on "their content"), showing that she was

Table 4.15.
Student A18's Tests 1 and 2 Introductions

Test 1: Comparison essay	***Test 2: Comparison essay***
Nowadays, the more the technology develops, the more people use online communication. Besides, the others prefer face to face. However; two types of communication have both similarities and differences.	*With the development of technology, the online classrooms have become more popular. Thus, some people think that the traditional classroom is still the best choice. Nowadays, One of the top concerns of parents is how their children are educated. Therefore, Are the traditional or online classrooms better? Although they bear some superficial similarities, the differences between traditional and online classrooms are remarkable. They are different in terms of* ***quality of lesson****, and* ***interaction with classmates****.*

able to not only use a thesis statement, she was also able to adapt it to a new purpose – to classify (see Table 4.16).

Table 4.16.
Student A18's Tests 3 and 4 Introductions

Test 3: Classification essay	***Test 4: Classification essay***
The more country has developed, the higher human being's need are. Therefore, the media means create a variety of new, creative appliciances such as YouTube, Soundcloud,... What do you watch on YouTube? To meet the personal needs of customers, YouTube have some following different types.	*With the development of technology and the needs of human beings, television programs play an essential part in our lives. Some people watch television programs for updating information; others watch television programs for entertaining, relaxing. Therefore, television programs can be classified into two categories such as news programs, entertainment programs according to* ***their content****.*

The two types of essays were taught structurally in the same way, but using different lexical and semantic resources. Students could capitalise on what they had learned in Phase 1 to help Phase 2. There was an improvement across the board; most of the students were successful in addressing the tasks with relevant main points.

4.7.1.2 Coherence and Cohesion. The second subskill of writing to be considered comprised the two textual organisational constructs: *coherence* and *cohesion*. *Coherence* mainly deals with essay organisation for overall clarity and fluency, while *cohesion* concerns the micro level of the text, that is, how well the words and sentences are connected using appropriate cohesive ties.

Based on functional grammar, there were a number of cohesive ties to look at, including grammatical cohesion using reference (e.g., pronouns, demonstratives) and conjunction (e.g., additive, adversative, temporal), as well as lexical cohesion (e.g., collocation) (Halliday, 2004; Thompson, 2014). Conjunctive cohesion is also an element of metadiscourse markers, which will be looked at separately when it comes to text analyses.

Online resources about the brainstorming of ideas and the use of reference and conjunctive signals were provided through handouts and online tasks. In class, there were opportunities for the students to capitalise on these online resources. For example, they learned to make an outline based on the ideas

they had brainstormed online (coherence). When the students practised writing one body paragraph, they could apply the markers they had learned (cohesion). The students could also learn from their peers' and Co Huong's feedback when they posted their writing online or exchanged their writing in class (see Week 7 schedule, Appendix A.1).

Examples from the final texts of Student A11's writing in each phase illustrate the organisation of ideas and use of reference, conjunction and lexical cohesion (see Figures 4.6 and 4.7).

Figure 4.6.
Student A11: Final Comparison Essay (Test 2)

> ***On the other hand**, not being completely as the same, these two ways of studying inevitably have their own distinctive features. When it comes to time, online classrooms are always more preferred than the traditional classrooms simply because it takes people less time in order to study. With online study method, people do not need to spend time travelling to schools or universities. **Instead**, they can study at anywhere, anytime that they would like to do such as at home or at coffee shops. **By contrast**, the traditional study method requires people to go to schools so as to study. **Furthermore**, because of the fixed timetable, people need to be on time if they do not want to miss the valuable knowledge. It is without question that it is totally more flexible and convenient for everyone to study with online method than traditional one.*

Figure 4.7.
Student A11: Final Classification Essay (Test 4)

> ***To begin with**, there are heaps of television programs with the entertaining purpose. **For instance**, we can watch many different television programs such as Who's a billionaire, Fast as light gameshow which attract thousands of viewers. **In addition**, we also can watch some music performances which definitely help us relieve stress or connect with our friends or even strangers. **Last but not least**, when it comes to entertaining programs, movies are must-have category. **To be more specific**, television provides us many kinds of movies such as romantic film, action or science fiction movies. **As a result**, we have a wide range of choice when we want to relax after spending a long hard day at workplace.*

In these examples, Student A11 was able to write coherent paragraphs with one central idea (*time flexibility* in a comparison essay, and *entertainment programs* in a classification essay) supported by relevant details. The reference cohesion *these two ways of studying* and substitution *online method* and *traditional one* create links to the comparison topic. What can also be seen is the use of conjunctive adverbs, such as *on the other hand* or *by contrast* in the comparison essay and *in addition* or *last but not least* to signal enumeration in the classification essay. These transitional markers connect the ideas from one sentence or paragraph to the next, and the relationship between the ideas is clear. Lexical cohesion was achieved through the use of associated lexical items such as *programs, gameshow, viewers, performances* and *movies* in the classification text.

After FC, the students managed to use more cohesive devices to logically link their ideas. Their writing, therefore, tended to flow with some control of the organisational features.

4.7.1.3 Lexical Resource. *Lexical resource* focuses on the range of vocabulary and implementation of academic words and phrases. Drawing on the IELTS criteria for lexical items, spelling

was included. Although spelling was not taught as an aspect of online activities, the students were recommended some learning tools such as 'Quizlet' to practise spelling.

Through online resources, the students had opportunities to brainstorm vocabulary related to the given topics on the application 'Padlet' and to learn to use formal words and phrases. To provide further support, practice of academic words in the form of multiple-choice or true-false questions was also included as a regular online activity. In class, Co Huong commented on the formality and relatedness of the vocabulary the students had listed online and pointed out some common mistakes in word choice. The students were encouraged to use the words they had learned from the online activities and seek out new words through a thesaurus (refer to Week 5 schedule in Appendix A.1). Figure 4.8 is text from Student A10's Test 2 and it has examples of everyday wording not picking up many academic words (as highlighted).

Figure 4.8.
Student A10: Final Comparison Essay (Test 2)

Traditional and online classroom also have three different points. The first one is that we can ask and be answered immediately in traditional classroom, but we have to wait for replying in online classroom because most online classroom only accept questions by emailing or sending messages. Teacher can know exactly whether students are good or bad in traditional classroom, but the online teachers can not. The next point is that when teachers give exercise for students, online teachers can not fix clearly for us because they have to type, so they can not express clearly. The final point is online exercises and instructions are always available. We just need to have Internet connection and get them. Therefore, we will feel easier when trying to remember or revise some thing whereas traditional classroom is hard for students when they need to remember something.

Figure 4.9, an excerpt from Student A20's Test 4, has an interesting mix of everyday and more sophisticated wording (as highlighted yellow).

Figure 4.9.
Student A20: Final Classification Essay (Test 4)

Next to the second program with entertaining. If you are busy with deadline, household chores, or working, you can relax with television show. It includes dramma, film, gameshow, contest about music, dancing, etc. Many programs have met hobby of viewer. The context of it is suitable for anybody. For example, you can see a movie by both lively sound and beautiful pictures. Besides

> *that you can get information with answering questions about topic which gameshow involves it. It creates a trend for everybody to watch it. It also like the other program, which means that has some drawbacks. This entaining programs maybe addicted if you watch it too much time. This thing gives for some children don't be concentrated on studying it. We only about the film, cartoon, which is dangerous. However, it is certain that entertaining program is useful and vital thing. Thanks to it, we can a good atmosphere with family or friend.*

In general, the students managed to use topic-related words to discuss their ideas. Although there were still inaccuracies in word choice (e.g., "*met hobby*" as in the above text) and spelling (e.g., "*dramma*" and "*entaining*"), they do not interfere with overall communication.

4.7.1.4 Grammatical Range and Accuracy. The final linguistic item explored was *grammatical range and accuracy*, which takes into consideration sentence structures, use of tenses, and sentence complexity. As a criterion in IELTS, punctuation was also included when judging writing achievements.

Knowledge about sentence structures had been taught in the previous semester's subject, Basic Writing, and was reinforced in this current semester. There was no time for follow-up grammar instructions in the face-to-face class, yet the students could practise grammar on their own by doing both compulsory and optional grammar activities online (refer to Week 6 schedule in Appendix A.1). When the students exchanged their writing in class or submitted it online, they learned from their peers' feedback. Co Huong also gave corrective feedback on their final writing products.

In the student scripts shown in the above section of *lexical resource*, development of grammatical complexity was demonstrated. For example, the students used compound sentences to contrast things in their comparisons, as in Student A10's writing:

- *Teacher can know exactly whether students are good or bad in traditional classroom,* ***but*** *the online teachers can not* [A10, Test 2].

The students also used complex sentences to give supporting details in their classification, as demonstrated by Student A20:

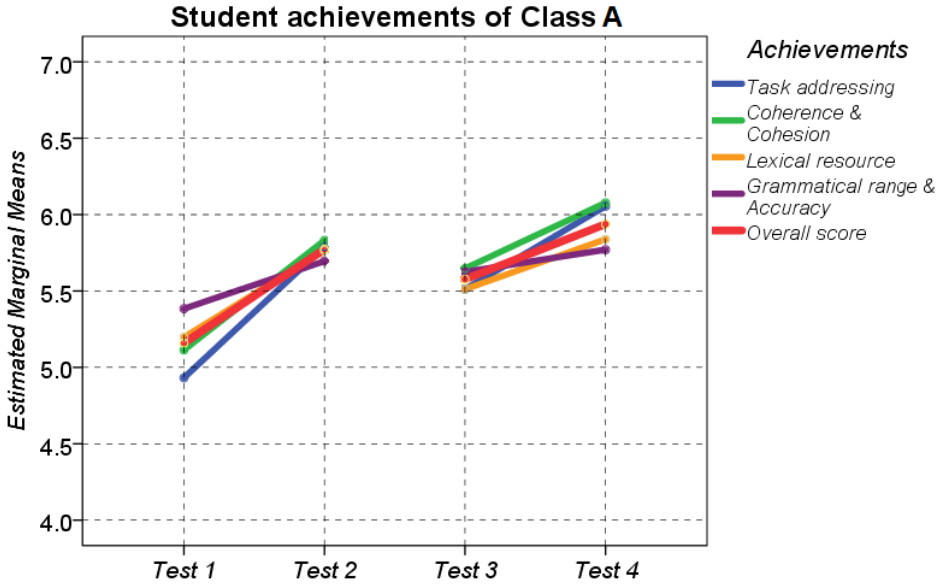
- ***If*** *you are busy with deadline, household chores, or working, you can relax with television show* [A20, Test 4].

Despite some problems in sentencing (e.g., the sentence fragment in Student A20's writing "*Next to the second program with entertaining*"), the students made some progress in terms of varied sentence structures.

4.7.2 Comparisons of Change Over the Phases

Using the subskills outlined above, writing from each test was assessed across Phases 1 and 2. The results were plotted to illustrate the changes over time, with each subskill indicated by a coloured line showing progress between Tests 1 and 2, and between Tests 3 and 4. The graph of these results is shown in Figure 4.10.

Figure 4.10.
Student Achievements Across the Tests



The steepness of the lines indicates the level of improvement in the students' scores between the pre/post-test of each phase and over the whole intervention. All lines rise, indicating that the students made progress in terms of overall writing proficiency and across the subskills. The steepness of the lines between Tests 1 and 2 indicates that the improvements were more substantial in Phase 1 than in Phase 2 in all aspects of writing. Despite having established a level of skill in Test 2 – the comparison text – the drop to Test 3 reflects the difficulty in adapting to a new set of text-type features in the classification essays. Of the four subskills, the most notable improvements occurred in *task addressing* and *coherence and cohesion*. *Grammatical range and accuracy* had the least progress, which could be a result of not having given much focus on this area during class time.

To examine whether there were significant differences in the students' scores between the pre/post-tests in each phase when the data are not normally distributed (see Appendix E.1-E.12), Wilcoxon signed rank tests of paired samples were conducted for Tests 1 and 2 as well as for Tests 3 and 4. The analyses reveal that the students improved considerably in the post-tests (i.e., Tests 2 and 4, in comparison with Tests 1 and 3, respectively) in most subskills (with all p-values less than 5%), except for *grammatical range and accuracy* in the second phase (with p-value greater than 5%) (see Table 4.17).

Table 4.17.
Wilcoxon Signed Rank Tests for Pair Samples

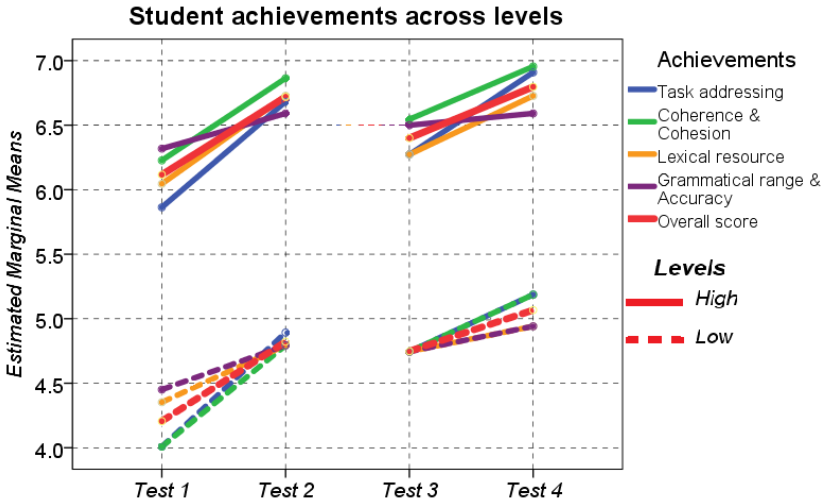
Writing Subskills	***Phase 1***				***Phase 2***			
	Test 1	***Test 2***	***Z***	***p-value***	***Test 3***	***Test 4***	***Z***	***p-value***
	Mean (SD)	*Mean (SD)*			*Mean (SD)*	*Mean (SD)*		
Task addressing	4.98 (1.25)	5.83 (1.16)	**3.898****	**0.000**	5.55 (1.08)	6.10 (1.15)	**3.573****	**0.000**
Coherence & Cohesion	5.17 (1.35)	5.88 (1.26)	**3.923****	**0.000**	5.69 (1.23)	6.12 (1.16)	**3.307****	**0.001**
Lexical resource	5.24 (1.19)	5.81 (1.23)	**3.213****	**0.001**	5.55 (1.05)	5.88 (1.18)	**2.725****	**0.006**
Grammatical range & Accuracy	5.43 (1.29)	5.74 (1.21)	**2.652****	**0.008**	5.67 (1.16)	5.81 (1.18)	1.508	0.132
Overall score	5.20 (1.23)	5.82 (1.17)	**3.949****	**0.000**	5.62 (1.08)	5.98 (1.15)	**3.447****	**0.001**
* ***significant at the 5% level,*** ** ***significant at the 1% level***								

This analysis indicates that Phase 2 had a lower level of improvement than Phase 1 in all subskills. To examine whether those differences were statistically significant, Rank ANCOVAs were applied. However, no heterogeneity between the two phases was detected, which implies no significant effect fade-out throughout the semester (see details in Appendix B.15).

Differences Between Low and High Performers

To identify whether students of varied levels benefited uniformly from FCs, the achievements of low and high performers were investigated. Similar to the trend reported for the whole class, low and high performers made better progress in Phase 1 than in Phase 2 (see Figure 4.11). Both levels tended to improve the most in *task addressing* and *coherence and cohesion*, and the least in *grammatical range and accuracy*.

Figure 4.11.
Student Achievements in Subskills Across the Levels



It is worth noting that the levels of improvement in all subskills of the low performers were greater than those of the high performers in Phase 1 (see Table 4.18). In Phase 2, the low performers made more progress than the high performers in the subskills of *coherence and cohesion* and *grammatical range and accuracy*. However, the differences in terms of level of improvement between the low and high performers were not statistically significant when Rank ANCOVAs were computed, except for better *task addressing* by high performers ($F = 4.150$, $p = 0.056$).

The levels of improvement of each group (low and high performers) in Phase 1 were higher than those in Phase 2, as indicated by the percentages of improvement in Phases 1 and 2 in Table 4.18. To examine whether there were significant differences within each group, Rank ANCOVAs were applied. The results reveal that for the low performers, the differences were not statistically significant. However, the high performers made significantly better progress in grammatical range and accuracy in Phase 1 than in Phase 2 ($F = 4.597$, $p = 0.044$). Further details can be found in Appendix B.16.

Table 4.18.
Rank ANCOVAs for Writing Subskills of Low and High Performers

Writing Subskills	***Phase 1***				***Phase 2***			
	Rate of improvement		***F***	***p-value***	*Rate of improvement*		***F***	***p-value***
	Low	***High***			***Low***	***High***		
Task addressing	31.10%	14.42%	0.497	0.489	9.85%	10.79%	**4.150**[#1]	**0.056**
Coherence & Cohesion	22.55%	10.27%	0.115	0.738	9.27%	7.36%	2.618	0.122
Lexical resource	12.44%	11.69%	2.644	0.120	3.57%	8.00%	2.206	0.154
Grammatical range & Accuracy	10.24%	4.45%	1.257	0.276	4.13%	1.56%	0.103	0.752
Overall score	17.91%	9.99%	0.234	0.634	6.33%	6.68%	3.305	0.085

In the subskill of *lexical resource*, a finer analysis helped reveal which linguistic features had the most improvement. Three linguistic features – academic words, academic phrases and metadiscourse markers – were analysed using Text Inspector (Bax, 2012). While types indicate the number of different items, tokens describe the total number of words (Nation, 2001). Total types and total tokens represent the total number of different words and word count in an average essay, respectively. Further details about students' vocabulary usage across the tests can be found in Table 4.19.

In both phases, the post-tests (Tests 2 and 4) witnessed all the higher values. Wilcoxon signed rank tests for Tests 1 and 2 reveal statistically significant differences in almost all aspects of vocabulary use (most p-values < 1%), which illustrates the students' lexical improvements after the first 5 weeks of

FC intervention. Although there was no statistical difference in the number of academic word tokens, the mean of Test 2 is still higher than that of Test 1 (Test 1: Mean = 18.62; Test 2: Mean = 21.33).

Table 4.19.
Descriptive Statistics and Wilcoxon Signed Rank Tests for Students' Lexical Resource Across the Tests

Students' Lexical Resource	***Phase 1***				***Phase 2***			
	Test 1	***Test 2***	***Z***	***p-value***	***Test 3***	***Test 4***	***Z***	***p-value***
	Mean (*SD*)	*Mean* (*SD*)			*Mean* (*SD*)	*Mean* (*SD*)		
Types of academic words	10.38 (3.93)	12.48 (5.35)	**2.006***	**0.045**	10.43 (4.29)	12.05 (5.76)	1.456	0.145
Tokens of academic words	18.62 (7.12)	21.33 (8.05)	1.462	0.144	11.57 (4.53)	13.67 (6.32)	1.535	0.125
Types of academic phrases	6.24 (3.32)	9.05 (4.65)	**2.899****	**0.004**	8.52 (3.08)	10.24 (3.70)	1.806	0.071
Tokens of academic phrases	7.43 (4.47)	11.38 (6.41)	**2.982****	**0.003**	10.67 (3.94)	12.52 (4.13)	1.594	0.111
Types of metadiscourse	17.57 (6.17)	21.95 (6.27)	**3.319****	**0.001**	18.38 (5.37)	23.14 (5.13)	**2.436****	**0.015**
Tokens of metadiscourse	37.38 (17.74)	49.57 (21.03)	**3.078****	**0.002**	33.67 (14.44)	45.00 (14.75)	**2.800****	**0.005**
Total types	124.67 (25.61)	158.14 (32.50)	**4.015****	**0.000**	155.90 (19.61)	176.29 (31.32)	**2.486****	**0.013**
Total tokens	251.76 (72.85)	347.62 (112.49)	**3.980****	**0.000**	300.57 (44.97)	358.52 (81.96)	**2.972****	**0.003**

* ***significant at the 5% level,*** ** ***significant at the 1% level***

When it came to the classification essays in Phase 2, the student's *lexical resource* appeared to improve in terms of academic phrases, metadiscourse markers, the number of different words (total types) and the total words (total tokens) they used in their essays, as manifested in the highest values in the final writing test. Wilcoxon signed rank tests for Tests 3 and 4 shed light on the values with statistical significance including the types and tokens of metadiscourse markers, and the total types and total tokens of words (p-values < 5%). It can be inferred from such variety of vocabulary that the students were bringing their vocabulary knowledge into active use in writing. Moreover, using more metadiscourse markers might have helped them to better organise the texts and convey their argumentation, resulting in their improvement in the subskill of *coherence and cohesion*.

Similarly to the statistical tests for subskills, the differences in terms of level of lexical improvement between Phase 1 and Phase 2 were investigated using Rank ANCOVAs. Although most of the rates of lexical improvement were higher in Phase 1 than in Phase 2, there was no significant difference between the two phases. Further details can be found in Appendix B.17.

Differences Between Low and High Performers

The level of lexical improvement of low and high performers was also a matter of concern. In terms of Phase 1 vocabulary, the low performers did not make as much progress as high performers, except in metadiscourse markers and word count. The high performers could make more effective use of the academic words and phrases in their writing than the low performers. Again, Rank ANCOVAs were conducted to investigate those differences. The results in Table 4.20 show that in Phase 1, the differences between the two groups concerning the types of academic words ($F = 4.954$, $p = 0.038$) and metadiscourse markers ($F = 6.461$, $p = 0.020$) were statistically significant. In Phase 2, the low performers improved better in the number of academic phrases and metadiscourse markers they used, compared to the high performers. However, overall, the high performers still outperformed the low performers in most aspects of lexical improvement, especially in terms of academic words. In both phases the low performers achieved better in metadiscourse markers.

Table 4.20.
Rank ANCOVAs for Lexical Resource of Low and High Performers

Students' Lexical Resource	***Phase 1***				***Phase 2***			
	Rate of improvement		***F***	***p-value***	*Rate of improvement*		***F***	***p-value***
	Low	***High***			***Low***	***High***		
Types of academic words	24%	30%	**4.954***	**0.038**	4%	44%	**4.158**#1	**0.056**
Tokens of academic words	15%	27%	2.714	0.116	8%	42%	**4.085**#2	**0.058**
Types of academic phrases	46%	68%	1.971	0.716	54%	13%	0.016	0.900
Tokens of academic phrases	61%	93%	1.198	0.287	49%	18%	0.177	0.678
Types of metadiscourse	37%	31%	**6.461***	**0.020**	42%	33%	0.835	0.372
Tokens of metadiscourse	50%	38%	0.012	0.914	61%	43%	0.002	0.961
Total types	32%	26%	0.107	0.747	9%	20%	1.623	0.218
Total tokens	43%	38%	0.096	0.760	15%	26%	0.422	0.524

* ***significant at the 5% level,*** ** ***significant at the 1% level***

With regard to the differences in level of lexical improvements across phases for each group (low and high performers), Rank ANCOVAs reveal no statistical distinction between Phase 1 and Phase 2 (with all p-values greater than 5%) (see details in Appendix B.18).

It is noticeable that for both levels there was a decline in most lexical progress towards the end of the study. This can be explained by the students' diminishing online engagement in Phase 2. Writing

achievements of some particular low and high performers will be described in greater detail in the next section about use-frequency groups.

4.7.3 Differences Among Consistent, Partial Users and Non-Users

Non-compliance with pre-class activities has been flagged as one of the reasons for students' lower academic achievements (Burke & Fedorek, 2017; X. Chen & DeBoer, 2015; J. S. M. Yang, 2020). This section looks at the writing achievements of the six students with varied online learning engagement. As mentioned earlier, each group of consistent, partial users and non-users includes both low performing and high performing students to allow comparison of the different levels. The results reveal that the greatest learning gains were made by the consistent users.

4.7.3.1 Consistent Users: Mai and Huu. As described earlier, Mai and Huu consistently engaged in flipped learning activities throughout the phases by watching all the videos and completing all the online tasks. With the FC, they achieved better results in the subskills of essay organisation and lexical usage, although Phase 1 yielded greater improvements than Phase 2.

Mai

As seen in Section 4.5, Mai was not confident in her writing and did not participate actively in class before FC. However, over the FC phases, she engaged more readily both online and in class, with all the videos viewed and activities completed. Her growth could be seen in her writing.

Mai achieved only 5 out of 10 in her first essay (Test 1), so she was classified as a low performer. However, across the tests, her overall rates of improvement were 13% in Phase 1 and 10% in Phase 2. Particularly in Phase 1, her rate of lexical improvement was 20% (see Appendix B.11-B.14 for detailed text analyses).

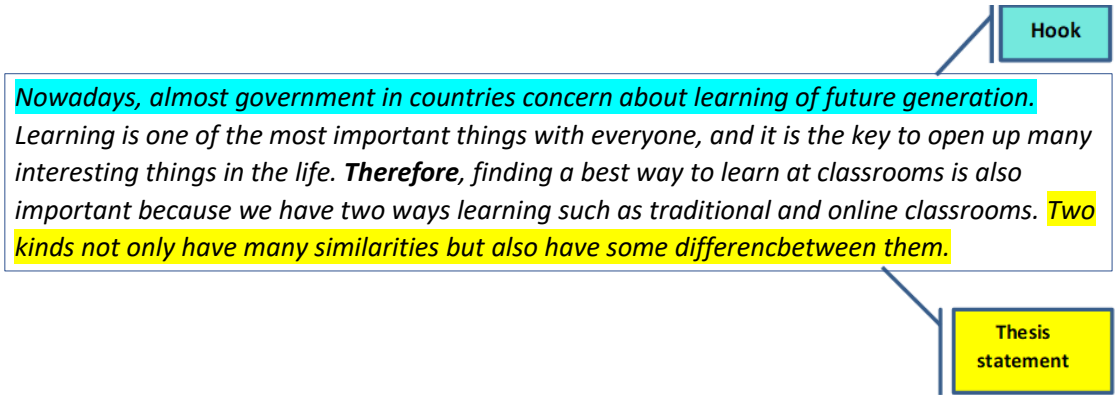
Over Phase 1, Mai learned how to write a hook and a thesis statement in an introductory paragraph within a comparison essay, seen in the excerpt in Figure 4.12. Topic-specific words (e.g., "*government*", "*concern about*", "*future generation*", "*open up*") were also included to draw readers' attention to the importance of the topic.

In Phase 2, Mai made the most improvement in *task addressing*, as indicated by the 22% rate of improvement. She could better organise classification essays using appropriate connectives (e.g., "*second*", "*especially*") and employ more complex sentence structures. For example, her sentence below contains two subordinate clauses starting with "*which*" and "*that*":

- *On the television, there are many online talking programs* ***which*** *help student can exactly choose suitable subject and universities* ***that*** *they dream to study*.

Some grammatical mistakes exist, such as sentence fragment "*. . . which help student can exactly*

Figure 4.12.
Mai: Final Comparsion Essay (Test 2)



choose...", and the wrong relative pronoun "*universities that they dream to study*", yet this sort of sentence shows an attempt at varying sentence structures. A longer section is shown in Figure 4.13.

Figure 4.13.
Mai: Final Classification Essay (Test 4)

> ***Second**, education is a problem which people pay attention to more, so some educational programs on television will help them. Viewers, especially many students need to have many educational program to improve in learning. There are a lot of educational programs such as: some channels for learning English, Math. **Especially**, good time for everyone is the final exam in high school. On the television, there are many online talking programs which help student can exactly choose suitable subject and universities that they dream to study. It's useful for everyone to see many educational programs. Educational programs give a part of future to many students.*

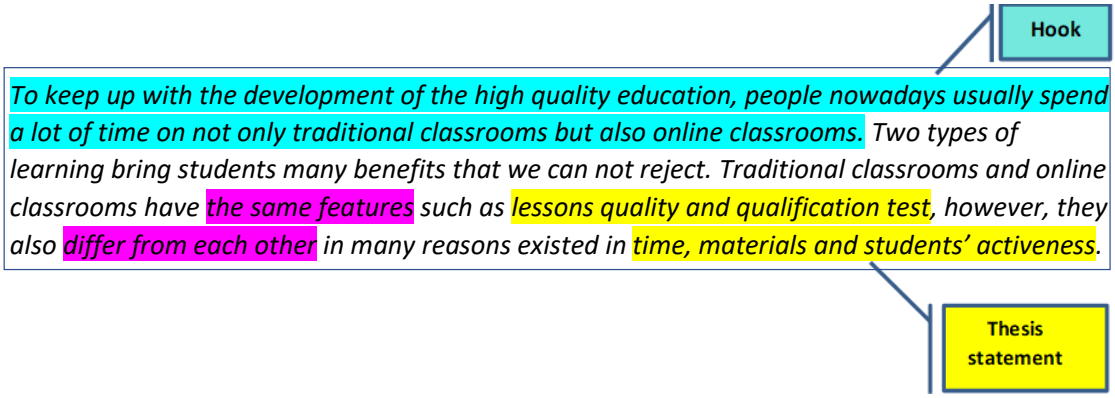
Although Mai had initial difficulties adapting to the new teaching mode, as explained in Section 4.5, she became more receptive to flipped instruction with multiple logins to watch the videos, multiple attempts at the online tasks, and active participation in class. Her improved writing seems to be the result of the greater support FC provided.

Huu

Prior to FC, Huu was considered a high performer with his Test 1 overall score of 6.13/10. Throughout the intervention, he participated actively in both online and in-class activities, as outlined in Section 4.5. Huu achieved better results across the tests with the rates of improvement of 12% in Phase 1 and 8% in Phase 2. He produced impressive pieces of writing in terms of the total tokens (three essays with more than 400 words each). He also maintained good lexical usage, with rates of lexical improvement of 17% in Phase 1 and 18% in Phase 2.

In Phase 1, Huu learned how to write a good hook and applied better paraphrasing ("*the same features*" for similarities, "*differ from each other*" for differences). His thesis statement presented a good signpost for organising his ideas in the body of the essay with clear points of comparison (similarities in terms of "*lessons quality and qualification test*", differences in terms of "*time, materials and students' activeness*") (see Figure 4.14).

Figure 4.14.
Huu: Final Comparison Essay (Test 2)



In Phase 2, as noted in the excerpt in Figure 4.15, Huu's appropriate use of connectives (e.g., "*next*", "*moreover*") and pronouns (e.g., "*they*", "*this kind*", "*this relaxing kind*") made his writing coherent and cohesive. Compared to Mai, Huu addressed the tasks better with skillful paragraphing. He brushed up on the use of academic words (e.g., "*similar*", "*relevant*", "*stressful*", "*recover*") and phrases (e.g., "*integral impacts*", "*relaxing moments*", "*hectic pace of life*", "*full of beans*").

Figure 4.15.
Huu: Final Classification Essay (Test 4)

> ***Next**, entertaining programs are the best choice to relax. They are not similar to political programs since they bring the audience more happiness and more relaxing moments. They can be a music program where we can listen all wonderful songs, a comedy program where we can laugh out loud with many funny story and sports programs where we can a lot of hot matches. That this kind contains a number of small relevant programs help itself satisfy even the most difficult audience. If you spend most of your time at the workplace and you feel very stressful, this relaxing kind can make you ease and recover. Entertaining programs have the integral impacts on helping people escape from the hectic pace of life and educating them through every lesson which is hided after every program. **Moreover**, the person who loves this kind tends to be very optimistic about his life and always keeps full of beans.*

Similar to what was reported about the achievements of low and high performers, Mai's writing had better rates of improvement than Huu's, although the discrepancy is not statistically significant. Overall, Huu outperformed Mai in terms of *task addressing* and *lexical resource*. Some mistakes in grammar and punctuation can be spotted in their writing, but these mistakes rarely impact communication.

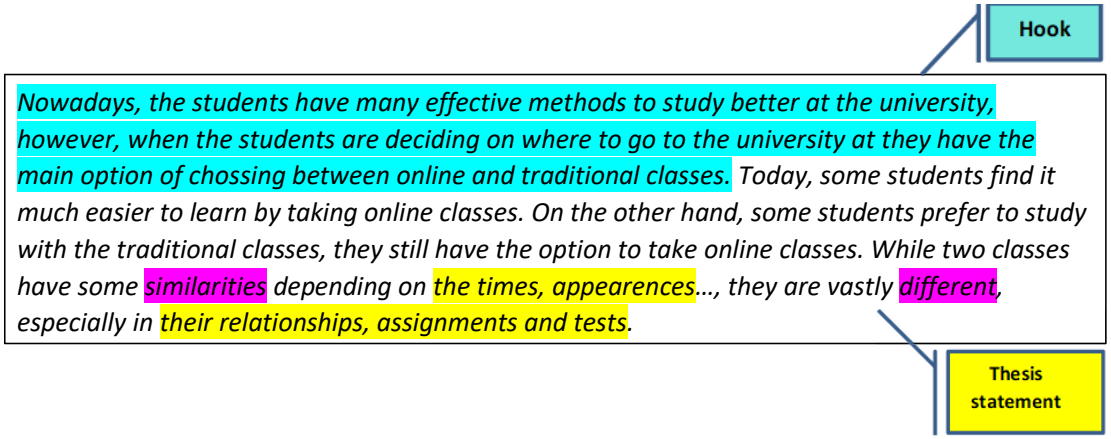
4.7.3.2 Partial Users: Thanh and Trong. Although Thanh and Trong did not engage regularly in online activities, they still benefited from some of the tasks and made progress in most subskills. In Phase 1, Thanh's learning gains were greater than Trong, but Trong's achievements were better in Phase 2.

Thanh

Before FC, Thanh was struggling with essay writing, as shown in her Test 1 overall score of 3.75 and word count of 231 words. Across the phases, she did not engage in watching the videos, but did most of the online tasks. As a result, Thanh used more words (Test 2: 349 words, Test 4: 335 words) and organised her essays better in the post-tests. She achieved quite better results in Tests 2 and 4 with an overall score of 4.38. Nevertheless, there was no substantial improvement in her lexical usage (see Appendix B.11-B.14 for detailed text analyses).

Compared to her first essay, Thanh's second essay has a better lead-in, and the thesis statement includes points of comparison (*the times, appearances, their relationships, assignments and tests*). However, she still made mistakes in spelling (*chossing, appearences*) and grammar (e.g., run-on sentence "*On the other hand, some students prefer to study with the traditional classes, they still have the option to take online classes*") (see Figure 4.16).

Figure 4.16.
Thanh: Final Comparison Essay (Test 2)



As may be seen in the excerpt in Figure 4.17, Thanh uses some markers (*first of all, for instance, furthermore*) to connect her ideas, but only a small number of academic words (*adults, appropriate, cultures*) in her final classification essay. She tried to employ a more complex structure and ended up with a lengthy sentence ("*For instance, many adults want to know some information of their country or their world, then they will watch news on TV instead of finding it on the Internet by smartphone because the news has been broadcast in a fixed time*").

Figure 4.17.
Thanh: Final Classification Essay (Test 4)

> ***First of all**, an important type of television programs is news. The news provides many informations about some daily situations, educations, cultures of the country. For instance, many adults*

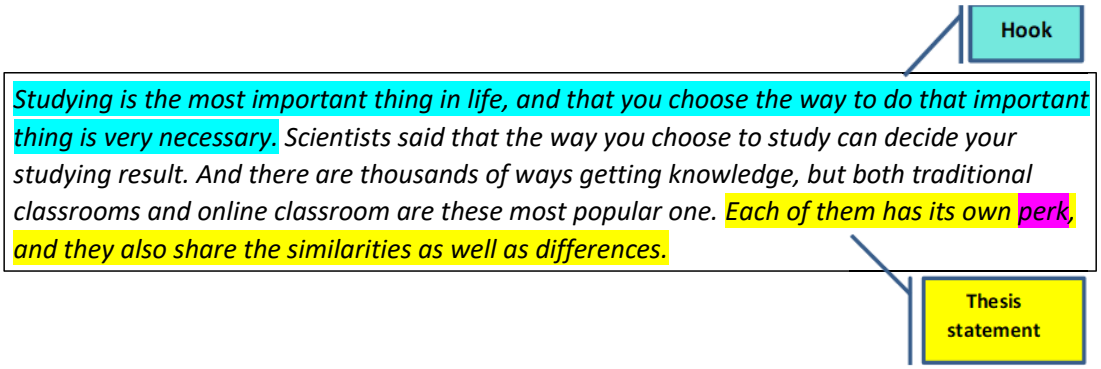
want to know some information of their country or their world, then they will watch news on TV instead of finding it on the Internet by smartphone because the news has been broadcast in a fixed time. That time is very appropriate for people to watch them regularly. Furthermore, when the news prepares for ending, they will have an weather forecast, and I think it's really necessary and useful.

As a low achiever and partial user of online materials, Thanh managed to conform to the structure of academic essays. Nevertheless, her progress in lexical usage and grammar was still limited.

Trong

All of Trong's essays exceeded 400 words (Test 1: 413 words, Test 2: 437 words, Test 3: 404 words, Test 4: 499 words). As explained in Section 4.5, he did not engage in the online tasks but preferred watching the videos. After FC, he did not get better at lexical quality over time. As may be seen in the excerpt in Figure 4.18, Trong used the informal word "*perk*" and failed to state the points of comparison when writing this comparison essay.

Figure 4.18.
Trong: Final Comparison Essay (Test 2)



When it came to classification essays, Trong used some academic words (*benefit, deny, financial, inserted*), but he still made mistakes in spelling (*sometime, pospone*) and word choice ("*they can not* ***remain*** *their product on television*"), as may be seen in Figure 4.19.

Figure 4.19.
Trong: Final Classification Essay (Test 4)

Whether will advertisement be audiences expectation? When you see a film or a game show, sometime there are some other programs which are directly inserted, which are advertisement program. This television program sometime make audiences annoy because they often pospone audiences's expectation. ***However****, we can not deny what benefit which advertisement programs*

> *bring to us. You all know that advertisement programs is the main financial of almost television progams. Without them, they can not remain their product on television.* ***Besides*** *advertisement programs also have their own benefit. Sometime, there are some funny songs, funny scenes make audiences laugh. They always update the new information from their product. You can see more and more new product are show in advertisement program and more and more audiences annoy because of it.*

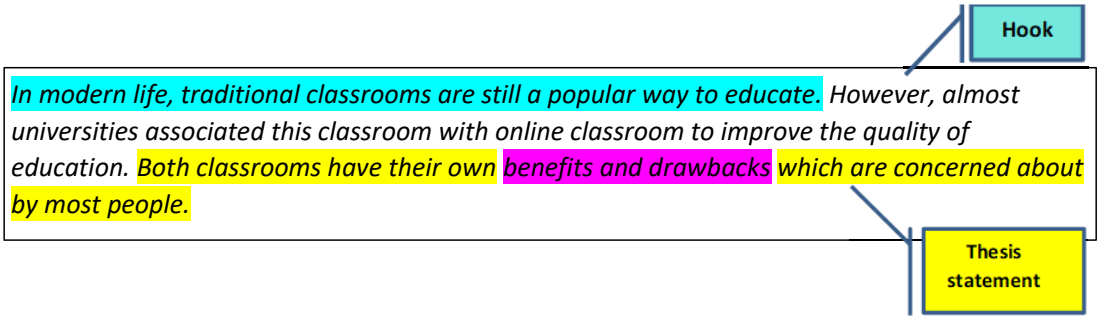
Compared to Thanh, Trong used more diverse structures in his writing (e.g., complex sentence "*When you see a film or a game show, sometime there are some other programs which are directly inserted, which are advertisement program*"). However, the learning gains by these two partial users, regardless of levels, were not as good as expected. One of the most challenging areas for these students to master was the *lexical resource* component.

4.7.3.3 Non-Users: Ngoc and Tien. As previously stated, Ngoc and Tien were the only two non-users of online resources and depended merely on smartphones for their learning. Prior to flipped instruction, their essays failed to meet the word limit requirement, with Ngoc's Test 1 being 161 words and Tien's 182 words. Although Test 4 noted their progress in the word count (Ngoc, 355 words; Tien, 298 words), their improvements in terms of lexical diversity were minimal compared to those of other users (see Appendix B.11-B.14 for detailed text analyses).

Ngoc

In Phase 1, although Ngoc managed to write a better introduction with a hook, she made little progress, as shown in her overall rate of improvement of 3%. As seen in her Test 2 introduction in Figure 4.20, she digressed, mentioning benefits and drawbacks, while the focus of this essay should have been on similarities and differences between traditional and online classrooms.

Figure 4.20.
Ngoc: Final Comparison Essay (Test 2)



In her final writing test, Ngoc mostly used simple sentences, with some attempts at complex sentences (e.g., "*There are some programs on television such as The Voice, Hidden Singer,... where people can watch candidates sing a song and get advices or comments from their coach*"). She used academic

words minimally (*comments, job, relax*) and still made mistakes in word form (e.g., "*advices*") (see Figure 4.21)

Figure 4.21.
Ngoc: Final Classification Essay (Test 4)

> ***Firstly**, entertainment programs bring happiness and laughs to everybody. There are some programs on television such as The Voice, Hidden Singer,... where people can watch candidates sing a song and get advices or comments from their coach. **Besides** this thing, people can know more songs and improve their knowledge about music. **Moreover**, these entertainment programs help people relax after a pressure job or studying. Because of these things, entertainment programs become more and more popular than past.*

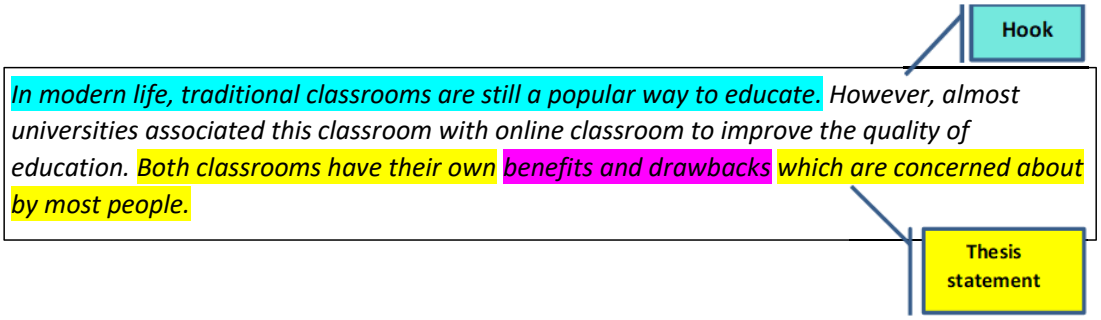
It is worth noting from previous sections that Ngoc, though not engaged in online learning, reported spending lots of time on her own writing practice (12 hours in Phase 1, and 8 hours in Phase 2). It can be inferred from her low test results that her self-practice was neither sufficient nor effective. Across the tests, Ngoc made some improvements in essay organisation, but her lexical progress was below expectations.

Tien

Although Tien's first essay did not reach the word limit of 250 words, he achieved an overall score of 5.88, which placed him in the group of high performers. Throughout the tests, he made good progress in most subskills, and even though he did not participate in online learning, his rates of improvement were 9% in Phase 1 and 10% in Phase 2.

Compared to his first writing, Tien's Test 2 introduction, as shown in Figure 4.22, conformed more to the requirement of a comparison essay, with comparison points (*work time and efficiency*) stated in the thesis statement.

Figure 4.22.
Tien: Final Comparison Essay (Test 2)



At the end of the course, Tien was able to maintain the flow using transitional markers (*looking to*

another type, however, until now, generally) and support his arguments with greater details. However, some common mistakes such as singular-plural mistakes (e.g., "*many researchs*", "*every movies*") and spelling (e.g., "*entertaiment*") brought his scores down (see Figure 4.23).

As a high performer, Tien learned quite well from in-class instructions, despite his failure to engage in online activities. His writing improved with time, but Tien was supposed to make further headway in terms of lexical usage.

Figure 4.23.
Tien: Final Classification Essay (Test 4)

> ***Looking to another type**, entertainment appears to be famous these days, overwhelming all the others, including news. Many researchs indicate that viewers are more likely to buy a TV to serve their wish of relaxation, rather than to know more about the daily news. Of course, as economy needs to grow, people are also asked to work harder, which is the main reason for the audience to seek more for entertaining shows. **However**, the fact that not every movies and series are delightfully interesting really starts an argument about what providers should premiere and what they should avoid. **Until now**, reaction from TV viewers still varies from person to person. **Generally**, many people are feeling good with the entertaiment.*

The findings reported in this section imply that the students who assumed responsibility for their own learning and engaged more in FC generally tended achieve higher grades. Specifically, the essence of flipped instruction is to move certain instructional materials outside the classroom to optimise class time for higher-order thinking activities and teacher-student interactions and feedback. FC success, therefore, critically hinges on the extent and effectiveness of pre-class study and in-class active learning activities. In this case, it seems that failure to engage with pre-class study resulted in slower writing improvements.

4.8 Teacher's Perceptions of FCs

The final perceptions of FCs ascertained in this case study were those of the instructor, Co Huong. To have a full view of her experiences and track any changes in her attitudes throughout the intervention, two semi-structured, in-depth interviews, each of 30 minutes, were conducted: (1) after the first 5 weeks of the FC, and (2) at the end of the course. Three themes emerged: teaching readiness and workload; student learning; and teaching adaptation.

4.8.1 Teaching Readiness and Workload

This was the first time Co Huong had applied an FC approach in her teaching, although she had participated previously in professional development training on blended learning and FCs. During those workshops, she had learned that an FC has the potential to free more class time for students' interactions and practice as they have a chance to view the video lectures beforehand. She found herself quite competent at creating a range of games and quizzes with online software, but she had no experience in making video lectures.

Her initial attempts at recording new materials took significant effort and led to frustration:

- *For my first 8-minute video, I spent almost three hours working on the slides, rehearsing, filming and refilming. It's so time-consuming even to set up for filming and have the videos edited* [interview 1].

As Co Huong was not experienced in lecturing in front of a camera, she made several failed attempts before her first video. Moreover, in order to fit in with her schedule and the studio booking, she stayed after school hours or used break time between class sessions for videoing. In Phase 2, things went more smoothly as Co Huong became familiar with video making. Actually, it was not the lack of competence but her aims for high-quality videos that made video-recording time-consuming:

- *It took me less time for my second video. However, I still had it recorded again until I was content with its quality* [interview 2].

Co Huong was also concerned that the FC method requires the use of technological tools, noting that both teachers and students must have access to the necessary technology:

- *The WiFi at school is still a problem, let alone online teaching. Most video editing software is not free, and it takes too much time and effort to make a high-quality video* [interview 1].

In Co Huong's view, the design and implementation of a flipped session can take teachers a significant amount of preparation time compared to a traditional lecture:

- *I need to consider a lot more things: the number and length of videos, accompanying questions and online tasks, besides designing in-class active learning activities. And the online session needs to be ready at least one week ahead for students' self-study* [interview 1].

Co Huong also found it hard to provide online support. Although some students reported in the questionnaires their difficulty in understanding the online materials, in fact, none posted any questions on the class forum. She added that her heavy teaching workload made it impossible to offer online supervision on a regular basis:

- *For this semester, I am in charge of nine classes from Monday to Friday. I hardly have time to monitor the online tasks daily* [interview 1].

Besides outlining the problem of workload, Co Huong made it clear that teachers need support for the application of FCs. As technology integration was considered the university's priority, she expressed a hope for university policies to offset the increased associated workload:

- *There should be more TAs [teaching assistants] to help teachers monitor online activities, and*

> *technical assistants to provide IT support. As class time is not reduced in an FC, teachers need supportive policies from the university so that they can really concentrate on their teaching* [interview 1].

These issues should be taken into consideration by universities and teachers when considering moving to FCs.

4.8.2 Student Learning

Despite the concerns above, Co Huong acknowledged some benefits of FCs in student learning. The effective use of class time is a major advantage of FCs in the context of language teaching as it may accommodate more time for interaction and feedback from peers and the teachers:

- *I think flipped instruction is more suitable for teaching writing than other skills. It allows more class time for student writing practice and teacher detailed feedback. Language learners need a certain amount of in-class time to master their skills through interactive activities, and flipped classrooms can enable that* [interview 1].

Even though some students were uncertain about peer editing, Co Huong explained that they would benefit more from giving each other feedback in a flipped writing classroom:

- *With guidance, English majors can do that [peer editing] quite well. They have been given detailed instructions online, so they know what to look for in a good essay* [interview 1].

Co Huong also explained the benefits of FCs in terms of students' study skills and engagement when they had to take responsibility for their own learning;

- *Students have a chance to experience new ways of learning, discover how to take advantage of online materials, and do more self-study. With the knowledge from the pre-class tasks, they tend to be more actively engaged in the lesson* [interview 1].

From her observations and conversations with students, Co Huong noted some positive changes in some students' attitudes:

- *It seems to me that at first, students were not very excited about the idea of home learning in a flipped classroom. But gradually, they, kind of, saw values of the pre-class tasks and engaged more in online learning* [interview 1].

However, Co Huong kept track of students' online participation, which led her to notice that engagement dropped slightly in Phase 2. This observation matches the students' lower ratings in terms of engagement in the second post-questionnaire.

Although Co Huong valued the advantages of FCs in terms of effective class time use and active learning, she was concerned about Vietnamese students' difficulty in adaptation. She was under the impression that they could have negative reactions since they were used to a traditional style of teaching:

- *Vietnamese students, they often wait for teachers to impart knowledge in class first so that they know how to apply it* [interview 2].

Although her students were equipped with study skills during their very first semester at university, Co Huong also anticipated student pressure to adjust to new FC routines:

- *Vietnamese learners often lack self-regulation. They should have been trained to learn autonomously since very young age. Flipped classrooms may be ineffective for some students because they may not undertake pre-class learning. Because they don't have such skills as self-regulated learning. Sixty periods of study skill training in their first year is never enough to build up such a skill* [interview 2].

With regard to self-regulated learning, Co Huong noted one disadvantageous characteristic of first-year students:

- *It depends on student levels. First-year students are often teacher-dependent. They don't know how to deal with learning materials, so they need teacher's instructions* [interview 2].

Co Huong also referred to one particular problem the students encountered during the semester – the reduction of course credits:

- *Since 2018 intake, the reduction of course credits for Grammar and Writing has made it more challenging for students to keep up with the course requirements. In this semester, students have to try harder to overcome their weakness in writing themselves. Whether or not they can be successful depends mostly on their learning autonomy* [interview 2].

On the one hand, the FC might offer students more support in their self-study so that they could bridge the gap in their writing skills, but on the other hand, the implementation of a totally new approach like FCs in this semester might add to their study pressure. To Co Huong, the effect of FCs on learning outcomes within a short semester was not very clear:

- *This is the first semester to apply flipped classrooms, and the duration of implementation is quite short* [10 weeks]. *Maybe, we need more time to notice any differences* [interview 2].

In order for FCs to be effective, Co Huong emphasised that her students would need to be open to the potential value of FCs and comply with the class rules she set at the beginning of the course:

- *As someone put it, "If you really want to do something, you'll find a way. If you don't, you'll find an excuse." Often, students tend to make few attempts, putting the blame on this or that if they themselves don't perceive any effectiveness. Students need to follow the rules of the classroom. They'll figure out ways to survive the class if they find it crucial to do so. And they'll only get truly involved if their learning goals are satisfied* [interview 2].

Co Huong pointed to the discipline and motivation students would need to commit to for their learning. Moreover, she suggested a way of dealing with some students' concerns about intermittent Internet connection and lack of learning devices – they could always use the library computers.

The following comments from Co Huong align with student responses to the questionnaires about one of their learning difficulties, namely, online distractions and learning expectations:

- *These days, students are easily distracted by social networking sites and games when studying online. A significant online learning activity, therefore, should be exciting and interactive, in which students can fulfil the task collaboratively and build rapport with others. Students want to go to class because they have friends to talk to, and the teacher to answer their questions and correct their mistakes* [interview 2].

And since students are already using social media for online communication, the learning materials need to mimic those interactions:

- *Students need partners and monitors in both online and in-class tasks, otherwise they will easily feel detached from those activities* [interview 2].

These comments echo what students suggested about more interaction with peers and feedback from the teacher in an FC (see Section 4.5).

4.8.3 Teaching Adaptation

After the first 5 weeks of FC application, Co Huong was not convinced that the cost of the time and energy needed to implement FCs was justified:

- *I won't use flipped classrooms for the next semester because it takes so much time and effort. I'll still have to adjust the materials to suit existing student ability. Anyway, I don't think I can manage immediate online support. If students can't get online feedback regularly, they'll soon lose their learning motivation. What benefits them more is more engagement in groupwork and interactive activities, so I might apply project-based learning in the future* [interview 1].

These comments above indicate her reluctance to apply FCs after weighing the advantages and disadvantages. She would rather choose another approach (she mentioned project-based learning) to

enhance active learning than the time- and effort-demanding FC.

Co Huong also noted that FCs would not significantly reduce her workload in subsequent years, since she still needed to make revisions:

- *Also, I'm not sure if I can still utilise the videos for the same course next semester. After each course, I often reflect upon my teaching and definitely make adjustments for the next courses* [interview 1].

However, by the end of the course, Co Huong had changed her attitude. She was even considering cooperating with other instructors acquainted with the FC method. While cooperation would lessen the additional time and energy being expended, she was afraid that finding a proper partner would not be a simple task:

- *I've never had a chance to collaborate in lesson design. I will consider applying FCs if I can work with colleagues who are time available and tech-savvy. But it's not easy to find one like that* [interview 2].

Moreover, Co Huong worried that the FC mode demands a lot from the teacher, including skills that teachers are not necessarily adept at. Since students learn best with attractive, vivid presentations, she was thinking of using high-quality commercial or publicly available materials with production qualities she couldn't provide:

- *Is it vital to make video lectures? As long as students know the lesson focus, there are other ways to transfer knowledge besides all-in-one videos. Online learning content, for example, on Coursera [massive open online courses provided by top universities], will be plentiful, more interesting, and professionally designed. These learning materials are easier to get updated than the videos teachers created in this course* [interview 2].

Co Huong believed that these open resources would benefit students' self-study, as students would have the freedom to choose what interests them and what suits them most:

- *Teachers will then evaluate whether given a wide choice of learning materials, students still achieve the learning outcomes* [interview 2].

In order to enhance learning commitment, Co Huong tended to maintain classroom discipline and rewards, taking into account her students' mostly extrinsic motivations:

- *Teachers should keep track of students' attendance and give bonuses for their active participation. When students are made aware of their weekly progress via online scores, they will be more motivated to learn. They often learn for short-term benefits like high scores* [interview 2].

Co Huong stepped into the FC approach with both internal and external challenges. Her particular view of Vietnamese students (lack of learning autonomy, teacher dependence and extrinsic motivation) may have resulted in her diminished confidence in their ability to use the mode well. External barriers such as time, workload and technical issues should be weighed against the perceived effectiveness of FCs. Co Huong, though harbouring some concerns, appreciated FC's benefits and planned for some adaptations accordingly.

4.9 Summarising Case Study A

This first case study set out to examine Co Huong's and her students' attitudinal changes and student writing attainments during continued use of an FC approach. The students in this class appreciated the FC for the opportunity to learn flexibly and effectively through online materials, as well as the chance to interact more with the teacher and peers. This research into the students' writing outcomes and lexical usage has revealed significant differences in their learning gains across the tests. In particular, the positive effects of FCs were more manifest when it came to low performers and consistent users of online resources. Despite some concerns, Co Huong believed some adaptation in terms of video sources and task design in FCs would not only alleviate teacher workload but also make student learning more effective.

Nevertheless, based on one single class, it is impossible to attribute students' progress solely to their participation in an FC. More extensive research is required to compare the classes with flipped and non-flipped iterations, as well as with different instructors, in order to establish more robust conclusions about the effects of this approach. The next chapter, focusing on the second case study, will provide another perspective and analysis of FC effects, since this class followed the FC approach in the first phase and the traditional approach in the second phase.

CHAPTER 5

Case Study B: Data & Findings

5.1 Introduction to the Chapter

This second case study presents an opportunity to compare what might happen when there is a transition from a flipped classroom (FC) to a traditional teaching approach. As with Co Huong in the Class A case study, Thay Tuan applied the FC approach in Class B for the first phase (Weeks 4 to 8) and returned to his traditional way of teaching in the second phase (Weeks 10 to 14) (see Table 5.1). This short-term use of the FC provides corroborating evidence for the Class A findings about the effects of FC approach. The shift in teaching model in the last 5-week period gave the students a chance to reflect upon this approach and compare it against traditional lectures within the same semester.

Table 5.1.
Research Timeline for Class B

		PHASE 1				PHASE 2	
Week	**1-3 (unobserved)**	**4**	**5-8**	**9**	**10**	**10-13**	**14**
Teaching Content	Review of Paragraphs	Pre-questionnaire **Test 1**	Description / Comparison	Post-questionnaire 1 **Test 2** Teacher interview	**Test 3**	Cause-Effect / Classification	Post-questionnaire 2 **Test 4** Teacher & Student interviews
Teaching Mode	Traditional		**Flipped**			**Traditional**	

In order to compare the two cases and identify points of difference, this chapter follows the same structure as Chapter 4, with a presentation of data and findings in response to the research questions (RQ):

(**1**) How do participating Vietnamese EFL students experience the flipped classroom?

(**2**) What are the effects of the flipped classroom on these students' achievements?

(**3**) What are the teachers' perceptions of implementing a flipped classroom approach?

For each data section, an overview of the whole class will be presented, followed by a focus on particular student groupings.

5.2 Thay Tuan's Classroom

5.2.1 Thay Tuan

Thay Tuan was aged in his 60s at the time of the study. He has a PhD in Education, and nearly had 40 years' experience in tertiary teaching. He reported having basic Information Communication Technology (ICT) skills and that he could effectively search for teaching materials. Like Co Huong, Thay Tuan had never used the FC pedagogy with technology, although he often assigned pre-class tasks for students. His belief, as expressed in the interviews, was that technology could benefit students as long as they were self-regulated and took responsibility for their study.

5.2.2 Thay Tuan's Students

Fifteen students were enrolled in Thay Tuan's writing class, of whom 11 (eight females and three males, aged 18 to 21 years) provided a full set of data. As in Class A, these students completed a pre-questionnaire about their use of technology to ascertain the factors that might influence their online engagement. It was noted from the pre-questionnaire that only three of the 11 students had prior experience in online learning (Students B7, B8, and B11). All the participants had both laptops/desktops and smartphones, except for Student B4, who had no smartphone.

When asked about their purposes for using digital devices, five students said they spent most time on social networking. The next most frequent activities were entertainment (two students), study (two students), and communication (two students). Four students, while reporting using the devices mostly for other purposes, rated social networking as the second-most frequent activity.

Before proceeding to examine the students' attitudes and performances throughout the interventions, their initial attitudes and academic levels will be outlined to set a baseline for comparison.

5.2.2.1 Students' Initial Attitudes to Academic Writing. In terms of the students' initial attitudes, three aspects – motivation, engagement, and perceived effectiveness – were examined prior to the FC intervention. Sixteen items of the pre-questionnaire were framed on 5-point scale from **1** (I strongly disagree) to **5** (I strongly agree). As with Case A, their responses to these items were interpreted according to the Likert scale breakdown shown in Table 5.2. (This table also appears in Chapter 4 as Table 4.2).

The descriptive statistics, together with the proposed interpretations, of the students' attitudes based on the pre-questionnaire are shown in Table 5.3. Given the small sample size of this case study, the results have been interpreted with caution.

Table 5.2.
Likert Scale Breakdown

Likert Score Range	Rating (R)
4.3 – 5.0	Highly Positive (**HP**)
3.7 – 4.29	Positive (**P**)
3.0 – 3.69	Moderate or above (**M+**)
2.3 – 2.99	Moderate or below (**M–**)
1.7 – 2.29	Negative (**N**)
1.0 – 1.69	Highly Negative (**HN**)

As with Class A, the students were quite neutral about the writing subject, especially in terms of perceived effectiveness. They were positive about writing essays (Item 1), and highly valued the utility of writing (Item 2). However, like the Class A students, they showed little willingness to write except for assessment (Item 3). A lack of writing confidence was noticed in their low rating of Item 4 (Mean = 2.27), which is similar to the Class A rating (Mean = 2.33).

Table 5.3.
Descriptive Statistics of Students' Initial Attitudes towards English Academic Writing (EAW)

Pre-Questionnaire Item	Mean (*SD*)	Rating
Motivation in EAW		
1. I enjoy writing academic essays.	3.73 (1.01)	Positive (**P**)
2. I believe writing could be of some value to me.	4.91 (0.30)	Highly Positive (**HP**)
3. I like to write even if my writing will not be graded.	3.18 (1.08)	Moderate or above (**M+**)
4. I think I do pretty well in writing, compared to my classmates.	2.27 (1.01)	Negative (**N**)
Engagement in EAW		
5. I always finish my writing homework before class.	3.64 (0.67)	Moderate or above (**M+**)
6. During writing class, I ask questions to help me learn.	2.45 (0.93)	Moderate or below (**M–**)
7. I feel excited about the things I learn in writing class.	4.00 (0.78)	Positive (**P**)
8. I often look for ways to improve my writing.	3.73 (1.19)	Positive (**P**)
Perceived Effectiveness in EAW		
9. My writing has improved with time.	3.09 (1.30)	Moderate or above (**M+**)
10. I am able to clearly express my ideas in writing.	3.18 (0.75)	Moderate or above (**M+**)
11. I know how to use VOCABULARY appropriately in my writing.	3.55 (0.69)	Moderate or above (**M+**)
12. I know how to use COLLOCATIONS appropriately in my writing.	3.09 (0.70)	Moderate or above (**M+**)
13. I know how to make an appropriate essay organisation.	3.36 (0.81)	Moderate or above (**M+**)

Pre-Questionnaire Item	Mean	Rating
Perceived Effectiveness in EAW	(*SD*)	
14. Before-class tasks help me prepare for the lessons better.	3.64 (0.67)	Moderate or above (**M+**)
15. Peers' editing helps me improve my writing.	4.36 (0.51)	Highly Positive (**HP**)
16. A teacher's feedback helps me improve my writing.	4.73 (0.47)	Highly Positive (**HP**)

Class B's engagement differed little from Class A's. The students reported not completing homework before class (Item 5) and not asking questions in class (Item 6), although they appeared to be interested in learning (Item 7) and seeking improvements (Item 8). Their responses to the six items about perceived effectiveness fell into the Above Moderate scale (Items 9 to 14). Similar to Class A, the most effective ways of learning for these students were from peer feedback (Item 15) and teacher feedback (Item 16). Compared to Class A, the students of this class said that they enjoyed writing academic essays more, but their level of writing confidence was a little lower. Before the FC, they perceived better effectiveness in terms of lexical usage, that is, vocabulary and collocations, than Class A.

5.2.2.2 Students' Writing Proficiency. Before the FC intervention, to establish the baseline writing levels, the students were given the same writing test as Class A on comparison essays, with a limit of 250 – 400 words. Without instructions about essay writing, most of them struggled to write a well-structured essay with a clear thesis statement and supporting details. In terms of word count, four writing pieces fell below the word limit, and of the seven that fulfilled the minimum requirement, those of Students B1 and B7 exceeded 400 words (see Appendix C.9).

5.2.2.3 Student Profiles. There often exists a variety of ability levels and learning styles in a language classroom. To observe any differences related to the students' starting points, their academic profiles were taken into consideration when examining the effects of FCs.

Academic Profiles: Low and High Performers

As with Co Huong's class, median scores of the first writing test (Test 1) were used to divide the participant sample into low performers and high performers. In Class A, the median was 5.25, while in Class B it was 6.25. This means that the five Class B students with scores below 6.25 were regarded as "low" performers and the six other students as "high" performers. The level division with mean scores and standard deviation (SD) of each group is shown in Table 5.4.

Table 5.4.
Level Division

Level	N	Mean	SD
Low	5	5.13	0.51
High	6	6.86	0.55
Total	11	6.07	1.03

Another way to differentiate groups of students was their online engagement, which can be an influencing factor of FC effectiveness. The students were also categorised based on the frequency of their engagement with online resources.

Use-Frequency Profiles: Consistent and Partial Users

As with Class A, the students were categorised based on similar online engagement patterns. For Class B, two patterns of the students' online engagement were noted: (**1**) consistent users (five students) of online resources, and (**2**) partial users (six students). As individual students represent various characteristics in terms of engagement and ability, two students (one male and one female) were chosen from each group for closer study (as also occurred with Class A). Table 5.5 shows the groupings with details about their codes, gender, and levels under their pseudonyms.

Table 5.5.
Groups of Use-Frequency

Consistent users (CU)	Partial users (PU)
Linh	***Chi***
Student B6, Female, Low	Student B4, Female, Low
Quoc	***Hoang***
Student B11, Male, High	Student B3, Male, High

In order to ascertain correlations with success/attainment, the next sections investigate the students' use of both online and in-class activities over the two phases of the semester: Phase 1 (flipped approach), and Phase 2 (traditional approach).

5.3 Students' Learning Experiences in Phase 1

From Weeks 4 to 8 of the semester, the Class B students received the same flipped instructions as Class A. They were able to access new knowledge through online learning resources one week before each in-class session, and class time was used for higher-order activities such as practice-oriented work and feedback.

5.3.1 Online Learning

In Phase 1, the students were required to watch the same videos as in Class A and complete associated online tasks before each class meeting. Their viewing behaviours are shown in Table 5.6.

Learning analytics data provided further details about regular and irregular viewers. Most of them watched all five videos, with a fall-off in the final video. Several students watched Videos 3, 4 and 5 minimally (10% or less). In particular, Student B4 missed watching the last three videos. Student B10 missed Video 3; Students B3 and B5 failed to watch Video 5 (see further details in Appendix C.1).

Table 5.6.
Tally of Students and Percentage of Video Viewed in Phase 1 (N=11)

Percentage of video viewed	Video 1 (3:27)	Video 2 (2:01)	Video 3 (6:41)	Video 4 (7:53)	Video 5 (1:48)
	Number of students				
0 – 10%	0	0	2	1	3
20 – 40%	0	0	0	0	0
50 – 70%	0	0	0	0	0
80 – 100%	11	11	9	10	8

In order to understand the students' engagement with technology, the responses to post-questionnaire 1 of those students who did not consistently engage in viewing activities shed light on some underlying issues. Student B4, who had missed the last three videos, revealed the following reason for not engaging:

- *I have no smartphone, so it's inconvenient to look up vocabulary when watching the videos on laptop* [B4, post-questionnaire 1].

Student B3 reported difficulty in logging in to watch the videos and complained about video sound quality:

- *Logging in LMS* [Learning Management System] *to watch videos is much more troublesome than read the textbook. Sometimes, there is crackling sound in videos, so I have to rewind* [B3, post-questionnaire 1].

Student B5's problem was with an Internet connection:

- *I have trouble with Internet connection when learning via my smartphone. Sometimes, I can't log in to watch the videos* [B5, post-questionnaire 1].

Learning analytics from Moodle showed high completion rates of online tasks, although there was a modest decline in student participation at the end of Phase 1. In all, seven of the 11 students completed all five tasks in Phase 1. Student B3 did not complete the first and the last two online activities (see Appendix C.2 for details). His comment again reveals his reluctance to learn online:

- *Logging in LMS requires Internet and smart devices which can cause more distraction than a textbook* [B3, post-questionnaire 1].

Student B2 recounted her initial difficulty, as a result of which she remained inactive online until Activity 3:

- *It was hard to understand some exercises, but later I found the recommended websites really interesting and useful* [B2, post-questionnaire 1].

Student B5 required more explanation of the online content in subsequent in-class sessions:

- *The online content is easy to understand; however, I'm still unclear about some points* [B5, post-questionnaire 1].

Despite the difficulties shown in these comments, eight out of the 11 students encountered no trouble in completing their homework. They ranked being able to understand the video lectures as "Very well" (two students), "Well" (four students) and "Quite well" (five students), as may be seen in the following comments:

- *Clearly-filmed videos, teachers' clear pronunciation and at moderate speed. I have no difficulty in understanding* [B8, post-questionnaire 1].
- *The content and the way the teachers present are clear and specific* [B10, post-questionnaire 1].

One student blamed her "bad" listening skill for her difficulty:

- *Because my listening skill is bad, I have to watch many times to understand* [B7, post-questionnaire 1].

As with Co Huong's class, the students from Thay Tuan's class indicated that they liked videos created by native English speakers and the teacher in charge. Despite this, they noticed some benefits of videos by Vietnamese teachers:

- *Video lectures by non-native English speakers have easier vocabulary* [B9, post-questionnaire 1].
- *Vietnamese teachers speak clearly and understandably* [B11, post-questionnaire 1].

In their responses to the open-ended questions, the students provided further details about their home study. Like Class A, most Class B students did not exceed the expectation of 5 hours of personal study (as stated in the course outline). Most (eight students) spent 1 to 2 hours studying online before class; the other three students (Students B1, B3 and B6) spent less than an hour doing online activities. In terms of the total time for home practice, the highest number, five students, devoted 2 hours. Although most students did not report instances of extended home study, Student B5, also a quite consistent user, claimed that she might spend up to 20 hours searching for sample essays, learning more vocabulary, and practising writing. Student B9, another consistent user, spent 6 hours watching Youtube videos and searching for further materials to supplement her understanding when the set content was unclear. On the other hand, Student B3 was not a consistent user of online materials but reported spending more than 5 hours per week reading English books and novels to enrich his vocabulary.

In summary, although, as mentioned earlier, most of the students were inexperienced in online learning prior to the FC, they participated well in most of the online activities. Having now discussed online

learning experiences, the following sub-section will outline the in-class sessions that depended on having viewed the online content.

5.3.2 In-Class Learning

During Phase 1 (FC), Thay Tuan followed the same teaching steps as in Class A, with class time used to extend student understanding and promote their writing skills. The various activities used in class were captured using an example of the Teaching Dimensions observation protocol (TDOP) (Hora & Ferrare, 2010), which divided the observation into 10-minute intervals within the first 50 minutes of the class (see the Observation Code Bank in Appendix A.4 for clarification).

Table 5.7.
An Example of Teaching Dimensions Observation Protocol in Phase 1

Min	**0–9:59**	**10-19:59**	**20–29:59** **30–39:59**	**40–49:59**
Teaching Methods	Interactive lecture: understanding check	Pair work: homework check	Group work	Student presentation
Pedagogical Moves	Organisation: transition from online session	Instructor moves into audience for individual support	Instructor moves into audience for individual support	Assessment
T-S Interactions	Comprehension question	Students' short responses	Students' long responses	Giving feedback
Cognitive Engagement	Reciting facts	Articulating ideas on a topic	Creating a piece of writing	Connections to the real world
Instructional Technology	Powerpoint slides	Books Chalkboard	Poster Chalkboard	Notes Powerpoint slides

Typically, Thay Tuan began by briefly reviewing the online materials. He did not repeat factual information from the videos, but instead reviewed conceptual understanding through a warm-up activity. For example, in one instance, he divided the class into two groups for a hot-seat activity, where one student from each group would deduce the words (i.e., key terms of the new lesson shown on the slides) based on the group members' explanation. After that, the students worked in pairs or groups for a homework check where they were encouraged to ask the teacher questions about any terms they did not understand. When it came to practice activities, Thay Tuan gave instructions and illustrative examples. The students worked on two or three tasks individually (e.g., writing an introduction) and collaboratively (e.g., making an essay outline). Meanwhile, Thay Tuan walked around the classroom and offered help whenever needed. The students presented their writing products on the board or as posters to the whole class. After the student presentations and peer feedback, Thay Tuan gave his own detailed feedback.

When asked about the in-class sessions, one student hoped for more mini-tests and mistake corrections. Two students expected the teacher to give explanations of online materials and exercises in subsequent face-to-face sessions:

- *There should be a session to answer questions students have about online learning* [B6, post-questionnaire 1].
- *Help students review what they have learned on LMS* [B7, post-questionnaire 1].

As in Class A, the students in Class B noted the need for in-class consolidation to clarify and reinforce the knowledge they had learned online.

5.4 Students' Learning Experiences in Phase 2

After 5 weeks using the FC, the second phase reverted to a traditional model, which Thay Tuan had been using with all other classes. In this phase, no specific readings or tasks about forthcoming lessons were assigned before each class. Thay Tuan gave lectures on the topic in class and the students were assigned to work on some exercises. He then randomly selected students to present their answers for in-class feedback. Further writing practice was assigned as homework, and recommended materials were posted on Moodle after the class session.

The TDOP used for the first 50 minutes of the class in Phase 2 is shown in Table 5.8.

Table 5.8.
The Teaching Dimensions Observation Protocol in Phase 2

Min	**0–9:59**	**10-19:59**	**20–29:59**	**30–39:59** **40–49:59**
Teaching Methods	Interactive lecture: Lead-in	Lecture with hand-written visuals	Individual work	Pair work
Pedagogical Moves	Illustration: Real-world examples	Emphasis: Essay outline	Assessment	Assessment
T-S Interactions	Display question Students' short responses	Comprehension question	Comprehension question	Display question Students' short responses
Cognitive Engagement	Articulating ideas on a topic	Articulating ideas on a topic	Articulating ideas on a topic	Connections to the real world
Instructional Technology	Chalkboard	Books Chalkboard	Books Chalkboard	Chalkboard

In Phase 2, the students experienced what it was like to have most time in class for delivering information. Previously in Phase 1, they commented on being able to spend more time discussing and

practising vocabulary in class. However, in Phase 2, they noticed a lack of time for interaction and group work. Five students suggested organising more group work for interaction and games for stress reduction:

- *Organise group work for students to interact and help each other* [B2, post-questionnaire 2].
- *I suggest organising games to consolidate vocabulary and reduce stress* [B9, post-questionnaire 2].

Interestingly, although there was less home practice required in the traditional class, most students reported spending more time studying at home in Phase 2 (3 hours or more) than in Phase 1 (2 hours). For example, Student B5 reported that she spent 20 to 25 hours per week practising writing, while Students B9 and B3 said that they spent 12 and 8 hours, respectively.

Reflecting on the move back to traditional classes, a number of students reported that they missed the videos and the opportunity for further practice:

- *I really like the videos in the flipped classroom. It would be better to have lots of videos and online exercises* [B6, post-questionnaire 2].
- [In the traditional class there is] *no support in lesson preparation. There should be online materials for students to review before class* [B1, post-questionnaire 2].

Such comments illustrate how the students were able to compare the two experiences of learning and note the advantages they saw in the FC.

5.5 Students' Attitudes to Academic Writing

As in Class A, in order to track attitudinal changes over the two interventions, all participating students were asked to rate their attitudes in two post-questionnaires in Weeks 9 and 14 (see Appendix A.3). The post-questionnaires had four sections: (**1**) five questions about their home study; (**2**) 16 questions about their attitudes towards English Academic Writing; (**3**) 10 questions about learning experiences; and (**4**) five open-ended questions. The reliability of the pre- and post-questionnaires was measured and generated acceptable Cronbach's alpha coefficients of 0.875 (16-item pre-questionnaire), 0.903 (26-item post-questionnaire 1), and 0.802 (26-item post-questionnaire 2). The students' responses to the questionnaires and a focus-group interview with four volunteers at the end of the course provided further insights into their attitudes towards EFL Academic Writing and their perceptions of flipped learning.

5.5.1 Students' Attitudes to Academic Writing Across the Phases

Compared to Class A, Class B tended to become less motivated in EFL Academic Writing in Phase 1 and they perceived less effectiveness in Phase 2. The descriptive statistics in Table 5.9 reveal the students' responses to the 16 Likert-scale items about their attitudes towards English Academic

Writing across the phases. The highest mean values are in bold. The interpretation of student ratings (R) uses the same short forms as in Table 5.2: **HP** (Highly Positive), **P** (Positive), **M+/M-** (Moderate above/below), **N** (Negative) and **HN** (Highly Negative). The "Change" column illustrates whether the students' attitude shifted after each phase of intervention, using symbols: ⬆ rising, ⬇ falling, and (–) unchanged.

The data from Phase 1 demonstrate that although the students felt slightly more confident in their writing (Item 4), they turned out to be less intrinsically motivated. There was a decline in their ratings of enjoyment (Item 1) and writing willingness (Item 3). Nonetheless, they tended to be more positive about homework completion before class (Item 5). After 5 weeks of the FC, they felt that their writing had improved slightly (Item 9). What they perceived as most effective in promoting their writing skills were the before-class tasks (Item 14) and teacher's feedback (Item 16). Compared to the Class A students' attitudinal changes after the FC, the attitudes of the Class B students tended to become less positive in terms of writing motivation and perceived effectiveness of lexical usage (vocabulary and collocations).

When the teaching mode reverted to the traditional one in Phase 2, the students became more motivated to write (Item 3). However, there was a downward trend in their perceived effectiveness of expressing ideas (Item 10) and overall writing improvement (Item 9). These trends of perceived effectiveness were opposite to those reported in Class A (the Class A students showed more positive attitudes in the second phase with FCs).

Again, to examine whether the differences in the students' attitudes in each phase were statistically significant, paired sample analyses were applied for pre/post-questionnaires in each phase. Due to the data type (Likert scale), as well as the violation of normality assumption, Wilcoxon signed rank tests were conducted for the two paired samples: pre-questionnaire and post-questionnaire 1, post-questionnaires 1 and 2 (see Appendix C.3 for details).

In Phase 1 (FC), Wilcoxon signed rank tests for pre/post-questionnaires 1 reveal significant differences in the students' perceptions of before-class tasks (Item 14: $Z = 2.449, p = 0.014$) and peer editing (Item 15: $Z = 2.000, p = 0.046$). Despite their higher appreciation of pre-class tasks after the FC, they seemed to lose some trust in feedback given by their classmates. One student explained in his interview that his essay was superficially reviewed, and another student expressed her disagreement with how her new word usage was rejected. The deteriorating attitude towards peer feedback in Class B was different from that of Class A: the Class B students had had higher expectations of peer feedback benefits prior to the study (Class A: Mean = 4.10; Class B: Mean = 4.36).

Table 5.9.
Descriptive Statistics of Students' Attitudes Towards English Academic Writing Across the Phases

Question Item	***Pre-questionnaire***		***Post-questionnaire 1***		***Change in Phase 1***	***Post-questionnaire 2***		***Change in Phase 2***
Motivation in EAW	***Mean*** *(SD)*	***R***	***Mean*** *(SD)*	***R***		***Mean*** *(SD)*	***R***	
1. I enjoy writing academic essays.	**3.73** (1.00)	**P**	3.27 (0.91)	**M+**	⬇	3.36 (0.81)	**M+**	–
2. I believe writing could be of some value to me.	**4.91** (0.30)	**HP**	4.55 (0.52)	**HP**	–	4.45 (0.52)	**HP**	–
3. I like to write even if my writing will not be graded.	**3.18** (1.08)	**M+**	2.73 (0.79)	**M–**	⬇	**3.18** (0.75)	**M+**	⬆
4. I think I do pretty well in writing, compared to my classmates.	2.27 (1.01)	**N**	2.36 (1.03)	**M–**	⬆	**2.82** (0.87)	**M–**	–
Engagement in EAW								
5. I always finish my writing homework before class.	3.64 (0.67)	**M+**	3.73 (0.91)	**P**	⬆	4.18 (0.60)	**P**	–
6. During writing class, I ask questions to help me learn.	2.45 (0.93)	**M–**	2.55 (1.13)	**M–**	–	**2.91** (1.04)	**M–**	–
7. I feel excited about the things I learn in writing class.	**4.00** (0.78)	**P**	3.82 (0.75)	**P**	–	**4.00** (0.45)	**P**	–
8. I often look for ways to improve my writing.	3.73 (1.19)	**P**	**4.00** (1.00)	**P**	–	4.00 (0.63)	**P**	–

Question Item	***Pre-questionnaire***		***Post-questionnaire 1***		***Change in Phase 1***	***Post-questionnaire 2***		***Change in Phase 2***
Perceived Effectiveness in EAW	***Mean*** *(SD)*	***R***	***Mean*** *(SD)*	***R***		***Mean*** *(SD)*	***R***	
9. My writing has improved with time.	3.09 (1.30)	**M+**	**3.55** (0.52)	**M+**	–	3.45 (0.93)	**M+**	–
10. I am able to clearly express my ideas in writing.	**3.18** (0.75)	**M+**	3.09 (0.83)	**M+**	–	2.91 (0.83)	**M–**	⬇
11. I know how to use VOCABULARY appropriately in my writing.	**3.55** (0.69)	**M+**	3.36 (1.21)	**M+**	–	3.00 (0.89)	**M+**	–
12. I know how to use COLLOCATIONS appropriately in my writing.	**3.09** (0.70)	**M+**	2.82 (1.08)	**M–**	⬇	2.73 (0.65)	**M–**	–
13. I know how to make an appropriate essay organisation.	3.36 (0.81)	**M+**	**3.64** (1.12)	**M+**	–	**3.64** (0.92)	**M+**	–
14. Before-class tasks help me prepare for the lessons better.	3.64 (0.67)	**M+**	**4.18** (0.75)	**P**	⬆	4.09 (0.70)	**P**	–
15. Peers' editing helps me improve my writing.	**4.36** (0.51)	**HP**	4.00 (0.45)	**P**	⬇	4.27 (0.79)	**P**	–
16. A teacher's feedback helps me improve my writing.	**4.73** (0.47)	**HP**	4.45 (0.52)	**HP**	–	4.45 (0.52)	**HP**	–

In Phase 2 (traditional approach), no differences in terms of student attitudes were proven statistically significant when Wilcoxon tests were applied for the two post-questionnaires. However, the respondents' learning engagement appeared to continue to improve from FC intervention until the end of the course. They tended to become more responsible for their home study (Items 5 and 8), and more autonomous learners in class (Item 6).

The previous Wilcoxon analyses demonstrate that there were some changes in the students' attitudes in each phase. However, there is no information about the differences in the extent of change between the two phases; that is, whether the levels of change were homogeneous. Therefore, analyses of covariance were applied for pre/post-questionnaires 1 of Phase 1 and post-questionnaires 1 and 2 of Phase 2. Due to Likert scale data and the lack of normal distribution as outlined above, Rank ANCOVAs were computed to assess the students' attitudinal changes across the phases. The results indicate no statistically significant differences in the students' attitudinal changes during the interventions (see Appendix C.4).

5.5.2 Differences Between Low and High Performers

To identify whether the different academic levels were affected by the FC, the attitudes of the low and high performers were examined using pre- and post-questionnaires. Table 5.10 displays the means of each group based on a 5-point Likert scale, with the largest values in bold. Across the phases, the high performers appeared to have more positive attitudes towards EFL Academic Writing than the low performers, which is the same as Class A. Both groups of Class B engaged more in seeking improvement (Item 8) and perceived greater effectiveness of before-class tasks (Item 14) in Phase 1 than in Phase 2. Unlike Class A, there was a decline in Class B students' writing enjoyment (Items 1 and 2) in Phase 1. In Phase 2, the low and high performers, though engaged more (as highlighted in Table 5.10), did not perceive as much effectiveness as in Phase 1.

Looking more closely, the low and high performers manifested particular patterns of attitudinal changes. When it came to writing improvement (Item 9) and essay organisation (Item 13), the low performers tended to be more positive under the FC than the traditional approach, while the high performers perceived otherwise.

To identify whether there were any significant differences in the levels of attitudinal change between the low and high performers in each phase, Rank ANCOVAs were employed for the pre/post-questionnaires 1 as well as post-questionnaires 1 and 2. The statistical analyses reveal significant differences between the low and high performers regarding the value of writing (Item 2: $F = 12.774, p = 0.006$) in Phase 1, and writing improvement (Item 9: $F = 6.415, p = 0.032$) and the use of collocations (Item 12: $F = 6.739, p = 0.029$) in Phase 2 (see details in Appendix C.5).

The students at different levels perceived these two teaching modes quite differently, as shown in the

Rank ANCOVA analyses conducted at each level across the phases. The low performers tended to perceive more writing progress in Phase 1 than in Phase 2 (Item 9: $F = 7.128, p = 0.028$). The high performers appreciated peer-editing more in Phase 2 than in Phase 1 (Item 15: $F = 5.067, p = 0.048$). The FC seemed to have more positive effects on the attitudes of the low performers than on those of the high performers.

Table 5.10.
Descriptive Statistics for EAW Attitudes of Low and High Performers

Question Item		Pre-questionnaire	Post-questionnaire1	Post-questionnaire2
Motivation in EAW				
1. I enjoy writing academic essays.	Low	**3.40**	2.80	3.00
	High	**4.00**	3.67	3.67
2. I believe writing could be of some value to me.	Low	**4.80**	4.20	4.40
	High	**5.00**	4.83	4.50
3. I like to write even if my writing will not be graded.	Low	2.40	2.80	**3.00**
	High	**3.83**	2.67	3.33
4. I think I do pretty well in writing, compared to my classmates.	Low	1.40	1.60	**2.20**
	High	3.00	3.00	**3.33**
Engagement in EAW				
5. I always finish my writing homework before class.	Low	3.60	3.60	**4.00**
	High	3.67	3.83	**4.33**
6. During writing class, I ask questions to help me learn.	Low	2.20	2.60	**2.60**
	High	2.67	2.50	**3.17**
7. I feel excited about the things I learn in writing class.	Low	3.80	3.80	**4.00**
	High	**4.17**	3.83	4.00
8. I often look for ways to improve my writing.	Low	3.20	**3.60**	**3.60**
	High	4.17	**4.33**	**4.33**
Perceived Effectiveness in EAW				
9. My writing has improved with time.	Low	2.40	**3.40**	2.80
	High	3.67	3.67	**4.00**
10. I am able to clearly express my ideas in writing.	Low	**3.00**	2.60	2.60
	High	3.33	**3.50**	3.17
11. I know how to use VOCABULARY appropriately in my writing.	Low	**3.20**	3.00	2.40
	High	**3.83**	3.67	3.50
12. I know how to use COLLOCATIONS appropriately in my writing.	Low	**2.80**	2.40	2.20
	High	**3.33**	3.17	3.17
13. I know how to make an appropriate essay organisation.	Low	3.20	**3.40**	3.20
	High	3.50	3.83	**4.00**
14. Before-class tasks help me prepare for the lessons better.	Low	3.60	**4.20**	4.00
	High	3.67	**4.17**	**4.17**
15. Peers' editing helps me improve my writing.	Low	**4.20**	4.00	4.00
	High	**4.50**	4.00	**4.50**
16. A teacher's feedback helps me improve my writing.	Low	**4.40**	4.20	4.20
	High	**5.00**	4.67	4.67

(The highlighting indicates growth)

5.5.3 Attitudes of Consistent and Partial Users

Having already established two categories of online engagement with four representatives (Linh and Quoc as consistent users, Chi and Hoang as partial users), data from the questionnaires and comments of these two pairs of users will indicate any attitudinal changes of particular users. The results reveal an increase in each pair's perceived effectiveness of FCs, despite their unchanged attitudes to the writing subject.

5.5.3.1 Consistent Users: Linh and Quoc. Prior to the FC, Quoc had experienced online learning, but neither Quoc nor Linh had heard about flipped instruction. Quoc tended to be a highly motivated and engaged learner in English Academic Writing (positive ratings for Items 1 to 3 and Items 6 to 8). Linh was less confident about her writing ability (Item 4: negative) than Quoc (Item 4: neutral), and she did not raise questions in class (Item 6: negative).

During the Phase 1, they both participated in all the FC activities. Linh, in particular, spent 2 hours watching the videos and doing online tasks, with further attempts at two online tasks. She claimed she understood the lessons well under the FC:

- Linh: *The videos give definitions, examples and questions, which helps me grasp the learning content of the upcoming class. Lots of materials posted make it easier for me to search for information. Specific exercises make it easier for me to understand. With flipped instructions, I have become more active in class* [post-questionnaire 1].

After Phase 1, Linh's writing motivation (Item 3: positive) and engagement in the English Academic Writing class (Items 6 to 8: positive) improved, although there was no increase in her confidence (Item 4: negative). Although she did not perceive herself to be effective in lexical usage (Items 10 to 12: negative), she noticed her progress in structuring ideas (Item 13: positive).

When the teaching mode switched back to traditional in Phase 2, there was a decline in Linh's writing motivation, engagement (Items 3 and 6: neutral) and understanding level ("Quite well"). However, she seemed to become more autonomous in completing her homework (Item 5: positive). She commented that she could understand the new concepts quite well because of the teacher's explanation. Linh still perceived as much improvement in essay organisation (Item 13: positive), but less overall writing progress (Item 9: negative) than in Phase 1:

- Linh: *Although I can actively search for information in a traditional class, I miss the videos and online tasks. I don't have detailed feedback as in a flipped classroom. After my submission, the teacher just marks and gives general comments, so I can't improve much* [post-questionnaire 2].

Her explanation implies that the amount of feedback she received in a traditional classroom was not sufficient for her writing improvement.

During the FC, Quoc spent a little less time and had fewer attempts at activities (see Appendix C.2 for details). He indicated that he understood very well, commenting that Vietnamese teachers spoke clearly and intelligibly. He tended to comply more with homework (Item 5: positive) and he perceived enhanced confidence (Item 4: positive), improvements in vocabulary (Items 10 and 11: positive) and essay organisation (Item 4: positive):

- Quoc: *Because of the flipped instructions, my writing skills have improved. I can use a variety of structures and express my ideas in different ways* [interview].

However, Quoc expressed little trust in peer editing (neutral rating for Item 15):

- Quoc: *My essay was superficially reviewed, and I have learned nothing from the peer feedback* [interview].

In the traditional lessons of Phase 2, Quoc was still engaged (Items 6 to 8: positive), but his writing motivation and confidence level decreased (Items 3 and 4: neutral). He perceived less effectiveness in overall writing and lexical usage (Items 9 to 12: neutral).

As was the trend in Class A, these students who learned consistently perceived themselves more capable of successfully engaging in the learning process in the FC than in a traditional classroom.

5.5.3.2 Partial Users: Chi and Hoang. Chi and Hoang had no online learning experience before Phase 1 (FC). Chi only had a laptop as a device for her study, and although she was less confident about her writing ability (Item 4: negative), she tended to enjoy writing more (Item 1: positive) than Hoang (Items 1 and 4: neutral). Prior to the intervention, they both admitted to not always completing their homework before class (Item 5: neutral). Chi, although less competent, perceived more writing improvements before the study (Items 12 to 14: positive).

In Phase 1, Hoang watched almost all the videos (except for Video 5) but failed to do Activities 1, 4 and 5, while Chi missed watching the last three videos but completed all online activities. They both had difficulty in understanding the video content. Hoang had to rewind because the video sound quality was not good, whereas Chi had to spend time looking up new vocabulary. Hoang seemed to be frustrated with the online mode and preferred learning in a traditional way:

- Hoang: *Logging in LMS requires Internet and smart devices which can cause more distraction than a textbook* [post-questionnaire 1].

These issues clearly hindered their efforts to fulfill the pre-class study. Hoang indicated a decline in the level of motivation (Item 3: negative), engagement (Items 5 to 6: negative, Items 7 and 8: neutral), and perceived effectiveness (Items 9 to 11: neutral) over Phase 1. In contrast, Chi tended to engage more in FC activities (Items 5 to 6: positive) and perceive more effectiveness (Items 11 to 13: highly

positive):

- Chi: *I have time to contemplate what I have learned as well as look up new vocabulary. I can learn autonomously with the materials that the teacher has posted online* [post-questionnaire 1].

In Phase 2, when the class reverted to the traditional model, Chi's motivation and engagement did not change significantly. She spent more time learning by herself (4 hours, compared with 2 to 3 hours in the FC), but perceived less overall progress (Item 9: neutral), especially in lexical usage (Items 10 to 12: negative):

- Chi: *My understanding level is only about 60%. Because the teacher's lectures are in English, I don't understand all the words. There are fewer materials for reference. Learning the old way will not enhance writing skills* [post-questionnaire 2].

Hoang's Phase 2 responses reveal increased engagement (Items 7 to 8: positive/highly positive) and perceived effectiveness (Items 10 to 13: positive) under the traditional approach:

- Hoang: *Perhaps, I am used to a traditional classroom, so I find nothing unsatisfactory* [post-questionnaire 2].

His preference for traditional models might have resulted in his reluctance in online learning, as outlined earlier.

5.6 Students' Perceptions of Flipped Learning

With a view to investigating the extended effect of the FC on student perceptions, the students were asked to rate their flipped learning experiences after 5 weeks of the FC (post-questionnaire 1) and after another 5 weeks of the traditional model (post-questionnaire 2).

5.6.1 Students' Perceptions of Flipped Learning Across the Phrases

The students' reflections on their flipped learning experiences across the phases were gathered through 10 Likert-scale items and five open-ended questions of the post-questionnaires 1 and 2, as well as the focus-group interview at the end of the study. The data show little change in the students' perceptions of the FC, observed in any shifts in attitudes over the phases. These shifts are indicated by symbols: ⬆ rising, ⬇ falling, and (–) unchanged on Table 5.11. It should be noted that Items 2, 4, 6 and 7 are negative questions.

The data from post-questionnaire 1 reveal the students' positive perceptions about the appropriate use of class time under a flipped approach in comparison with a traditional one (Item 1). The students indicated that they valued the role of videos/materials in understanding the lessons better

(Item 5). However, they did not perceive much increase in teacher-student interaction (Item 8), and peer interaction (Item 9) in the FC. Although at this stage they remained unsure about their preferences for a traditional approach and lectures (Item 6), they acknowledged the benefits of flipped instruction (Item 7) when asked if they found the FC of any benefit.

Table 5.11.
Descriptive Statistics of Students' Perceptions of Flipped Learning Across the Phases

Question Item	***Post-questionnaire1***		***Post-questionnaire2***		***Change in Phase2***
	Mean *(SD)*	***R***	***Mean*** *(SD)*	***R***	
1. Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom.	**4.00** (0.45)	**P**	3.73 (0.91)	**P**	**–**
*2. I feel I am more in charge of my learning in a **TRADITIONAL** classroom.*	2.73 (0.91)	**M–**	**2.82** (1.08)	**M–**	**–**
3. I participate more in the flipped classroom activities than in traditional classrooms.	3.55 (0.82)	**M+**	**4.00** (0.78)	**P**	⬆
*4. I **DO NOT** enjoy flipped classrooms.*	**2.18** (0.75)	**N**	1.82 (0.60)	**N** (*i.e. positive about FC*)	**–**
5. I think the online videos/materials guide me toward better understanding of the course topics.	**4.09** (0.54)	**P**	**4.09** (0.70)	**P**	**–**
*6. I prefer **TRADITIONAL** lectures in class to video lessons at home.*	2.55 (0.93)	**M–**	**2.64** (0.92)	**M–**	**–**
*7. I feel the flipped instruction **DOES NOT** help my learning.*	1.73 (0.47)	**N**	**1.82** (0.75)	**N**	**–**
8. The flipped classroom facilitates more communication between me and my teacher.	**3.27** (1.01)	**M+**	**3.27** (1.01)	**M+**	**–**
9. The flipped classroom facilitates more communication between me and my classmates.	**3.55** (0.82)	**M+**	**3.55** (0.93)	**M+**	**–**
10. Generally, I am happy and satisfied with the flipped learning experience.	**4.00** (0.45)	**P**	**4.00** (0.63)	**P**	**–**

At the conclusion of Phase 2, the results remained stable. A modest majority of seven students expressed their preference for the FC regarding the efficient use of class time (Item 1). On reflection, nine of the 11 students considered they had participated more in the FC than in the traditional one (Item 3). Eight students acknowledged the benefits of pre-class video and tasks for better comprehension of the lessons (Item 5). The students' ratings on their preferences for traditional lectures over videos (Item 6) were moderate, as in Phase 1. They felt satisfied with the flipped learning experience (Item 10). These findings regarding the students' positive attitudes to flipped learning form a consistent pattern across Classes A and B.

As in Class A, Wilcoxon signed rank tests were applied to elaborate on the findings. The results indicate that there was no significant difference in the students' perceptions of the FC across the phases (see Appendix C.7 for details).

The students' responses to the open-ended questions concerning the strengths and weaknesses of the flipped instructions echo the ratings above. The data from a focus-group interview at the end of the study also reveal positive perceptions. Four students (Students 1, 6, 8 and 11) voluntarily participated in the focus-group interview that lasted nearly one hour. None of these interviewees had heard about FC before the project. From these qualitative data emerged the following five themes, which are similar to those noted in Class A.

5.6.1.1 Learning Materials. In the FC, rich and easily accessible input resources facilitated the students' understanding of the key knowledge:

- *The video lectures are vivid and understandable. Moodle is rich in activities for students' active learning* [B5, post-questionnaire 1].
- *There are more ways to acquire knowledge and vocabulary, which increases my interest in studying* [B2, post-questionnaire 1].

Some also indicated a preference for videos as replacements for reading resources:

- *I like to watch videos more than read a long list of vocabulary and materials. Too many materials are posted, which should be replaced by equivalent videos to make it less discouraging* [B6, post-questionnaire 1].

Having opportunities to watch videos in English also enhanced their listening skills:

- *The theory in handouts can be replaced by videos, which interests me more rather than read them. Watching videos helps me take in the information easily and practise listening* [B7, post-questionnaire 1].

However, learning at home meant there was no one at home to clarify the meanings. Some students were frustrated with activities that were pitched too high:

- *There are some exercises I don't understand (though I can do some parts), for example, Noun Collocations* [B2, post-questionnaire 1].

The students also proposed some suggestions for FC improvement; for example, the embedded questions in the videos should focus on low-level knowledge to encourage student engagement:

- *Some embedded questions are quite hard for my level. I had to look up new words and use Google to search for the answers* [B6, interview].

With the reversion to the traditional approach in Phase 2, the students complained about a lack of both support in their lesson preparation and materials for practice:

- *I have difficulty in exploring the lesson. I'm not clear about the upcoming lesson* [B1, post-questionnaire 2].
- *I have more difficulty in exploring the lessons due to mere lectures, and fewer interesting online activities* [B2, post-questionnaire 2].

Student B6 described her experiences of learning without the FC:

- *In a non-flipped classroom, I feel like a lost hunter having to search for my own prey, or like entering into the battlefield with no weapon, and really scared!* [B6, interview].

The FC provided the students with access to reliable sources for writing practice and revision and enabled them to learn actively, effectively and efficiently. It can be discerned from Phase 2 data that a lack of FC support might lead to reduced learning engagement and increased anxiety about making mistakes.

5.6.1.2 Opportunity for Self-Regulation. In Phase 1 (FC), the students were able to learn at their own pace at home at any time and watch the videos multiple times to ensure comprehensive understanding:

- *I think this kind of classroom helps distribute study time logically. This gives me more time for in-class activities and build up my autonomy* [B1, post-questionnaire 1].
- *I was not active before FC. I didn't know what to learn and what to revise. But in an FC, I know the key content and learn better* [B6, interview].
- *Learning online before class helps save my time, and I can learn more* [B9, post-questionnaire 1].

Sitting in on lectures in Phase 2, the students referred to losing focus in their study. For Student B8, not only did her individual study become less effective, but she also had to try harder to make up for missing the pre-class learning:

- *I often neglect my study as there are no tasks to be done. Then I often prioritise other courses to meet the deadlines. In class, I end up feeling stupid and unresponsive. In a non-flipped class, there are fewer exercises, but I have to make more effort* [B8, post-questionnaire 2].

This comment resonates with a finding described in Section 5.4 about the students' increased time for home study in Phase 2. By implication, FCs caused a front-loading in student workload but did not appreciably increase their overall workload.

5.6.1.3 Amount and Quality of Interaction and Feedback. The students perceived that FCs provided expanded opportunities for interaction and feedback in class:

- *I can spend more time discussing in class* [B6, post-questionnaire 1].
- *Through practice, we know what's still missing. The teacher will give feedback and help me build up from my writing* [B8, interview].

Meanwhile, in the traditional classroom, the students were dissatisfied with the amount of interaction and detailed feedback given:

- *There should be more interaction, otherwise the classroom is boring. We just listen to lectures and do tasks* [B1, post-questionnaire 2].
- *I don't have detailed feedback as in a flipped classroom. After my submission, the teacher just marks and gives general comments, so I can't improve much* [B6, post-questionnaire 2].

One criticism was about the fewer practice-oriented activities and the possibility of student passivity in a lecture-based classroom:

- *It makes students less active because in-class time is spent on lectures instead of group work. Students have so much time in comfort zone, and unlikely to be triggered by the teacher* [B8, post-questionnaire 2].

Although the students could ask questions and get immediate feedback in class, they still felt reluctant to ask the teacher, and ended up being confused about the lessons.

- *During home study, there is no one to consult when I have problems* [B5, post-questionnaire 2].
- *When I have questions about the lessons, I don't know how to ask the teacher* [B7, post-questionnaire 2].

Most of the students expected to be involved in more group work and discussions, which they thought would be more attainable in an FC than in a lecture-based classroom.

5.6.1.4 Technological Use. Despite the comments about how the FC optimised their learning environment, some students indicated unfavorable attitudes toward video quality:

- *Some videos with bad volume cause difficulty in listening* [B1, post-questionnaire 1].

Their attitudes could have been affected by the technology. For example, Student B5 found difficulties with Internet connectivity and mobile learning:

- *I have difficulty with Internet connection when learning with my smartphone. Sometimes, I can't log in to watch the videos* [B5, post-questionnaire 1].

They also gave some suggestions to make their online learning easier and more enjoyable:

- *Some students may need video subtitles to make it easier to understand. The sound quality*

should also be improved [B1, interview].

- *Video lighting should be enhanced so that students can concentrate more* [B11, interview].
- *I enjoyed watching the animated videos* [B6, interview].

Given that students demand materials of high quality, it is important for teachers to know how to use the affordances of the FC model to make learning most effective.

5.6.1.5 Perceived Effectiveness. With the pre-class self-study, the students expressed more confidence about gettting involved in class activities to advance their skills and knowledge:

- *This kind of classroom brings me a fresh, new experience. Online learning helps me understand better* [B11, post-questionnaire 1].
- *I can experience a new learning method. Online tasks help improve my English such as listening, reading, and writing* [B7, post-questionnaire 1].

After experiencing both models, the students said they spent time more effectively and achieved better outcomes in the FC compared with the traditional classroom. During in-class lectures they tended to become less active and doubted their effectiveness:

- *There are fewer materials for references. Learning the old way will not enhance writing skills* [B4, post-questionnaire 2].
- *Without the flipped classroom, it's hard to catch up in Thay Tuan's class. His questions require a lot of skills including vocabulary, grammar and critical thinking to answer* [B1, interview].

Overall, flipped instruction appeared to create a viable learning environment for the students' perceived shift from passive to active learning. They agreed that compared with lecture-based teaching, the various activities in the FC stimulated and involved them in their learning, and helped them develop their English writing competence in a new way.

5.6.2 Differences Between Low and High Performers

As described earlier, there were particular patterns in attitudinal changes of the low and high performers. The data reveal that their perceptions of FCs differed similarly. As calculated through mean scores of their ratings in the two post-questionnaires (as highlighted in Table 5.12), when comparing FCs with the traditional model, the low performers tended to view FCs more positively than the high performers.

Table 5.12.
Rank ANCOVAs for FC Perceptions of Low and High Performers

Question Item		***Post-questionnaire1***	***Post-questionnaire2***	***F***	***p-value***
1. Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom.	Low	4.00	4.00	0.759	0.406
	High	4.00	3.50		
*2. I feel I am more in charge of my learning in a **TRADITIONAL** classroom.*	Low	2.80	2.40	1.473	0.256
	High	2.67	3.17		
*3. I participate more in the flipped classroom activities than in **TRADITIONAL** classrooms.*	Low	3.40	3.80	0.501	0.497
	High	3.67	4.17		
*4. I **DO NOT** enjoy flipped classrooms.*	Low	2.20	1.80	0.001	0.979
	High	2.17	1.83		
5. I think the online videos/materials guide me toward better understanding of the course topics.	Low	4.20	4.20	0.063	0.807
	High	4.00	4.00		
*6. I prefer **TRADITIONAL** lectures in class to video lessons at home.*	Low	2.60	2.40	1.574	0.241
	High	2.50	2.83		
*7. I feel the flipped instruction **DOES NOT** help my learning.*	Low	2.00	1.60	0.952	0.355
	High	1.50	2.00		
8. The flipped classroom facilitates more communication between me and my teacher.	Low	3.00	3.00	0.010	0.924
	High	3.50	3.50		
9. The flipped classroom facilitates more communication between me and my classmates.	Low	3.40	3.40	0.087	0.775
	High	3.67	3.67		
10. Generally, I am happy and satisfied with the flipped learning experience.	Low	4.00	4.00	0.000	1.000
	High	4.00	4.00		

(The highlighting indicates growth)

To examine whether those differences in their perceptions were statistically significant, Rank ANCOVAs were applied, and these are represented by F statistics and p-values in Table 5.12. However, there was no significant difference in their perception change between the two phases (with all p-values greater than 5%).

For this class, the low performers were much the same as the high performers in terms of FC enjoyment (Item 4) and satisfaction (Item 10). The high performers seemed to feel more in charge and participate more in the traditional classroom than the low performers (Items 2 and 3), while the low performers perceived more benefits of FCs in regard to use of class time (Item 1), pre-class materials (Item 5), and learning improvements (Item 7).

5.6.3 Perceptions of Consistent and Partial Users

Returning to the students of varied use-frequency (consistent and partial users), it seems that their engagement with the online materials was strongly correlated to their satisfaction in Phase 1 (FC).

5.6.3.1 Consistent Users: Linh and Quoc. In Phase 1, Linh and Quoc were active online; they viewed all the videos and completed the tasks. They both agreed that flipped learning made more effective use of class time (Item 1: positive), and they saw the benefits of before-class tasks in lesson comprehension (Item 5: positive):

- Linh: *Despite lots of materials, I find them novel and interesting. I'm quite interested in multiple choice questions. If there are more such questions and explanations, I will understand more* [post-questionnaire 1].

Although they had more control of when and where to engage with the online materials, at first they felt less in charge in the FC in terms of choosing their own learning content (Item 2: Linh – negative; Quoc – neutral). Their perceptions changed (Item 2: both – positive) on return to the traditional model. Quoc perceived himself as being more autonomous and active (Item 3: Phase 1 – neutral, Phase 2 – highly positive) in the FC than in the traditional one:

- Quoc: *In a flipped classroom, I tend be more autonomous in preparing the lesson to acquire knowledge before class. In class, the teacher will expand the knowledge, not limited to the one in coursebook. This kind of preparation is not new to me, but more effective for my learning* [interview].

Although they were initially neutral in their preferences for traditional and video lectures (Item 6), they seemed to be less predisposed to the traditional lectures of Phase 2 (Item 6: negative). Their comments illustrate the boost in their positive ratings for FCs after experiencing the non-flipped approach:

- Linh: *It looks like, in a flipped classroom, I can learn twice. If I don't understand something when learning at home, I still have a chance to have it explained in class. In a traditional class, I don't often dare to ask the teacher* [interview].
- Quoc: *Flipped classrooms help me grasp the lesson content more easily. So, when it turned non-flipped, I lost my focus. I just maintain basic understanding* [post-questionnaire 2].

Both students were satisfied with the levels of interaction between student–student, teacher–student, and the learning experiences (Items 8 to 10: positive/highly positive) in the FC. Quoc, however, complained about the limited opportunities for interaction in a lecture-based class:

- Quoc: *The study in a traditional classroom is quite dry. Teacher-student interaction is not much* [post-questionnaire 2].

To the consistent users, the quality of student interactions in the FC approach surpassed that of the traditional approach, with these students realising that the pre-class study and the teacher's immediate feedback in the FC might result in better performances in their face-to-face sessions.

5.6.3.2 Partial Users: Chi and Hoang. Although both Chi and Hoang engaged irregularly in online learning activities, they had different perceptions of FCs. Chi held positive attitudes towards flipped instruction, saying that she could benefit from the effective use of class time (Item 1), active participation (Item 3) and pre-class materials (Item 5) in an FC. In Phase 2, her difficulty in home study resulted from the lack of useful materials to improve writing skills:

- Chi: *There should be more additional materials for students' self-study and homework* [post-questionnaire 2].

In Phase 2, Chi's preference for FCs was maintained (Items 1, and 3 to 7: positive ratings for FC). Under flipped instruction, she felt more in charge of her study (Item 2: negative about traditional classroom), but ambivalent about the optimal level of interaction with teacher and friends (Items 8 and 9: neutral).

In contrast, Hoang's reluctance to learn online (as noted earlier) might have resulted in his average ratings for the FC, although he acknowledged its assistance to his learning (Items 5 and 7: positive about FC):

- Hoang: *The lecture videos are short and concise, accompanied by plentiful materials* [post-questionnaire 1].

Having previously characterised technology as a distraction, Hoang preferred to have traditional lectures (Item 6: positive) and learn in his own way through reading books. When the traditional model resumed, Hoang reported being more in charge of his learning:

- Hoang: *I spend 7-8 hours mastering vocabulary. If "in-mind writing" is counted, I spend more than 12 hours practising writing* [post-questionnaire 2].

Hoang's initial attitudes towards online learning might have influenced his perceptions of the flipped learning environment.

After experiencing both flipped and traditional classrooms, the students tended to hold more positive perceptions of FCs, especially in terms of effective learning. How these interventions can make a difference in their achievements is the focus of the next section.

5.7 Students' Achievements

As with Class A, in order to examine the students' progress, four writing tests were administered before and after each phase of the intervention. The pre- and post-tests were analysed based on four subskills (adapted from IELTS Task 2 Writing band descriptors, see Appendix A.2): (**1**) *Task addressing*, (**2**) *Coherence and cohesion*, (**3**) *Lexical resource*, and (**4**) *Grammatical range and accuracy*. As with Class A, the tests were set up as shown in Table 5.13.

Table 5.13.
Writing Pre- and Post-Tests Across the Phases

Phase 1	Test 1	Pre-test of comparison essays
	Test 2	Post-test of comparison essays
Phase 2	Test 3	Pre-test of classification essays
	Test 4	Post-test of classification essays

To avoid bias and maintain consistency, double-blind marking of Class B's essays were done by the researcher and the same EFL teacher who marked Class A's essays, based on the course's standardised writing rubric just mentioned. The Cohen's kappa statistics, which indicate interrater reliability, found a substantial agreement, with results ranging from 0.604 to 1.000 (see Appendix C.8 for details).

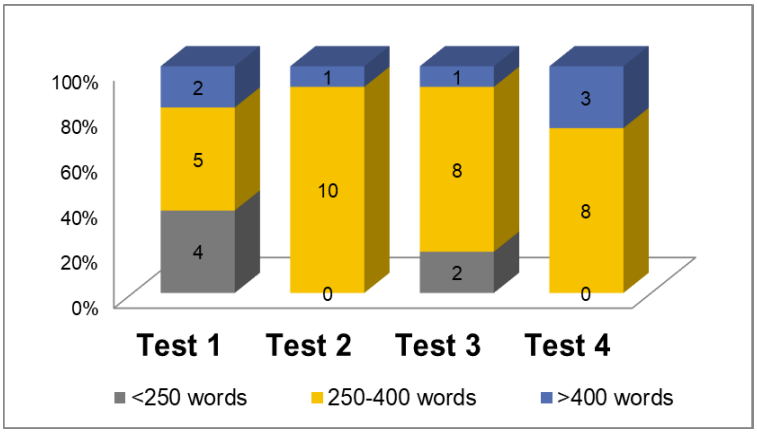
To allow for a more fine-grained understanding of student lexical achievements, Text Inspector (Bax, 2012) analysed the types (the number of different words) and tokens (the total number of words) of academic words, academic phrases, metadiscourse markers, and total word count. These are explained in the next sections.

5.7.1 Achievements in the Subskills of Writing

As with Class A, the students' progress in the four subskills of writing (equally weighted) was analysed across the two phases of the interventions.

5.7.1.1 Task Addressing. This subskill is similar to the IELTS "*task response*", and it refers to presenting a well-developed response to the task with relevant, extended and supported ideas. As a criterion of *task addressing*, word count was also taken into consideration. In the post-tests (Tests 2 and 4), all the students wrote well beyond the minimum requirement of 250 words (see Figure 5.1), which implies they had a better capability to express their ideas.

Figure 5.1.
Word Count Across the Tests



As shown in the stacked column chart, four students did not meet the word limit in Test 1, but they did meet this threshold in Tests 2 and 4. In Test 2, Student B6, who was regarded as a consistent user of online activities, exceeded the 400-word limit. Despite an increase in long essays (three essays with more than 400 words) in Test 4, of particular note was a significantly high number of words produced in Test 2 of the FC, with all the essays exceeding 300 words (see Appendix C.10).

As for the students' composition analysis, the essays' overall organisational forms conformed more to the instructions given during the lessons than was the case in the pre-test. In Phase 1 (FC), videos, handouts, and online tasks about writing an introduction with a hook and a thesis statement were provided before class. As with Class A, the students then had opportunities to write the introductions individually for feedback from their peers and the teacher (see Week 4 schedule, Appendix A.1).

How the students used both the hook and thesis statement to address the tasks can be discerned in the introductions of Student B5's Tests 1 and 2 about comparison essays (Table 5.14). The hook of the second test (as highlighted blue in the text) was more skilfully put, moving from a general topic ("*the development of technology*") to a specific topic ("*online classrooms*"). The points of difference "*the time, the ways that teachers teach*" stated in her thesis statement (highlighted yellow) signposted what to expect in the body paragraphs.

Table 5.14.
Student B5's Tests 1 and 2 Introductions

Test 1: Comparison essay	***Test 2: Comparison essay***
In our life, there are some different ways for people to communication. Face-to-face communication and online communication are popular and play an important part in human's communication activity. Certainly, there are some similarities and differences between them.	*Nowadays, because of the development of technology, more and more modern devices are released to help students in learning. So, they can study well whenever they are in class or at home by online classrooms. Anyway, beside some similarities, there are also some differences about* ***the time, the ways that teachers teach****,... between traditional and online classrooms.*

Classification essay writing was the focal point of Tests 3 and 4 (in Weeks 10 and 14). In Phase 2, the students were able to take advantage of what they had learned in Phase 1 about introducing main points and developing ideas. There was in-class practice, but Thay Tuan only had time to give detailed feedback on one or two pieces of writing.

The basic pattern for writing introductory paragraphs can be found in Student B5's Tests 3 and 4 in Table 5.15; however, the post-test (Test 4) failed to mention the principle of classification (i.e., in what way the subject is classified), as required in a classification essay.

There were overall improvements between the pre-tests and post-tests. The analysis of the *task addressing* subskill shows that the students were able to make a comparison in Phase 1 and a classification in Phase 2. They were also able to better harness the language resources to address the tasks through

the *coherence and cohesion* subskill.

Table 5.15.
Student B5's Tests 3 and 4 Introductions

Test 3: Classification essay	***Test 4: Classification essay***
Nowaday, as the development of technology, YouTube is also more and more popular with people. They view any kinds of YouTube videos. As a result, YouTube has become increasingly cluttered with influences creating content. As we all know, YouTube has many different types of videos, and I think the most popular videos are about education, music and vlogs.	*With the busy life of people nowaday, they have to face with many problems and stress during one day of them. Following this, they need to relax and have wonderful time with their family or friends. Anyway, I think that television programs can help you entertain effectively. In this essay, I classify that there are three type of television programs: programs for kids, programs for teen and medium people and program for old people.*

5.7.1.2 Coherence and Cohesion. The subskill *coherence and cohesion* is an important feature of academic writing and refers to essay organisation and connection of ideas.

As in Class A Phase 1, the Class B students were provided with online resources and tasks to support the brainstorming of ideas, the use of references, and conjunctive signals. In class, there were opportunities for the students to capitalise on these online resources. For example, they worked in groups to make an outline based on the ideas they had brainstormed online (coherence). When the students practised writing body paragraphs in class, they learned how to apply the markers appropriately (cohesion). Students could also learn from their peers' and Thay Tuan's feedback when they posted their writing online or exchanged their writing in class (see Week 7 schedule, Appendix A.1).

After returning to the traditional model, the students were taught about cohesive devices through the tasks in the coursebook. After the lesson, Thay Tuan posted sample essays on Moodle for the students' reference. In the subsequent in-class session, he picked one or two examples of the students' homework writing for analysis of essay organisation.

The excerpt of Test 1 shown in Figure 5.2 illustrates that Student B2 could only use simple transitions (first, next, finally) to connect her ideas and without elaboration on these main points.

Figure 5.2.
Student B2: First Comparison Essay (Test 1)

Although face-to-face and online are two different ways of communication, they still have the similarities. ***First****, they all use to transport information.* ***Next****, they are a tool to connect everyone together.* ***Finally****, as a obviously thing, we use them to communication.*

Examples from the final texts of Student B2's writing at the end of each phase illustrate better organisation of ideas and use of conjunctions (in bold) and reference cohesion (as underlined) (see Table 5.16).

Table 5.16.
Student B2's Tests 2 and 4 Body Paragraphs

Test 2: Comparison essay	***Test 4: Classification essay***
***Finally**, the amount of knowledge is the last difference. In the online classrooms, students have more time to practice, to find out more information of the lessons, which makes them more understanding about what they learn and have more great knowledge. **In contrast**, because of the limited time, students can easy to be confused about what they're learning or easy to forget what their teacher teach after the class. **As a result**, they won't find any interest to learn and they will be lack of knowledge.*	*The one for entertainment is more popular and variety then the one for knowledge. It contains many shows such as song competitions, cook competition, game show, comedy show,... and even more. Its viewers is very popular from young-age to old-age. Almost every channels have at least one entertainment program to have more viewers, and have more money. This type of program has a positive effect on us that is make us laugh, if have more fun after an all day long from working or studying. **However**, because the large number of the shows, people sometimes can't choose the suitable show for them, especially for kids; which cause the bad behavior of the kids when they watch the unsuitable show their age.*

It is worth noting that the students could use the cohesive devices they had learned in Phase 1 when it came to Phase 2. In the Test 2 shown in Table 5.16, Student B2 knew how to discuss one point of difference (the amount of knowledge) of both online and traditional classrooms together and stuck to that structure in the next paragraph. However, the points in Test 4 were presented randomly at times, which made the body paragraphs not parallel. For example, the sentence "*Almost every channels have at least one entertainment program to have more viewers, and have more money*" is quite unsuitable as a supporting detail. Although both essays made some valid points, the students seemed to have better improvements in Phase 1 when using the online resources.

5.7.1.3 Lexical Resource. This subskill element is related to the use of a wide range of vocabulary to convey precise meaning.

In Phase 1 (FC), the students had opportunities to brainstorm vocabulary related to the given topics on the Padlet application and to learn to use formal words and phrases. To provide further support, practice of academic words (based on the Academic Word List (Coxhead, 2000)) in the form of multiple-choice or true-false questions was also included as a regular online activity. In class, Thay Tuan commented on the formality and relevance of the vocabulary the students had listed online and pointed out some common mistakes in word choice. The students were encouraged to use the words they had learned from the online activities and to seek out new words through a thesaurus (refer to Week 5 schedule in Appendix A.1).

Reverting to the traditional approach in Phase 2, Thay Tuan helped the students brainstorm the related vocabulary in class. Academic words and phrases were acquired through the tasks in the coursebook and reading materials posted online. Table 5.17 shows the texts from Student B7's Tests 2 and 4. Comparing the two texts, it seems that the students used more academic words (as highlighted) and sophisticated wording in Test 2 of Phase 1.

Table 5.17.
Student B7's Tests 2 and 4 Body Paragraphs

Test 2: Comparison essay	***Test 4: Classification essay***
On the other hand, traditional and online classrooms have many differences about study time of each student; interaction with teacher and the tests of them. Firstly, Traditional classroom is origin of teaching in every school, students learn and interact directly with their teachers. They can ask their teacher about their question easily, because the teachers and student directly interact and exchange emotion, it helps the lesson become vivid and attractive. However, student in traditional classrooms must obey the regulation in class, like: keeping silent to listen the lesson, go to school on time, respect the teacher . . . In addition, when the test comes, student must complete the test seriously, and the supervisor will look after them to ensure that there isn't having cheat. About online classroom, it's so different, students learn and interact with their teacher through internet services, so they maybe feel bored about the lesson and feel hard to interact and exchange with their teachers. However, their study times are so flexible, they can learn anytime and anywhere, they mustn't go to school everyday and on time to study, they just study when they want. Besides, when the test comes, they do not obey the regulation, it's easy for them to pass. Otherwise, they must be responsible for studying alone, and they must have timetable to study carefully.	*Firstly, entertainment program includes: gameshow channels, films channels and singing channel... that programs helps people relax and enjoy. The program often has on TV at after working time, at weekend, time for meal . . . the time that people are free and together. That program is suitable for all people, because it helps people relax for all ages. "Running man" is the most famous gameshow recently that people are fantastic so much, especially teenagers. In brief, entertainment program is a good choice for you to relax yourself after work.*

In both phases, the students were able to use topic-related words to discuss their ideas. Although Phases 1 and 2 were teaching different things, lexical usage appears better in Phase 1, when the students had more chance for vocabulary practice.

5.7.1.4 Grammatical Range and Accuracy. In addition to vocabulary knowledge, grammatical knowledge is needed to connect the words into proper clauses and sentences. This final criterion of assessment refers to the ability to use a wide range of structures with accuracy.

As in Phase 1 of Class A, there was no time for follow-up grammar instructions in the face-to-face class, yet the students could practise grammar on their own by doing both compulsory and optional grammar activities online (refer to Week 6 schedule in Appendix A.1). When the students exchanged their writing in class or submitted it online, they learned from their peers' feedback. In terms of grammar, Thay Tuan mostly gave corrective feedback on the students' final writing products.

In Phase 2 using the traditional approach, the students practised grammar through the tasks in the coursebook. Due to the limit on class time, Thay Tuan gave quick feedback and referred the students to the course references for further practice. In the student scripts shown in the previous section on *lexical resource*, development of grammatical complexity was demonstrated. For example, the students used compound sentences to draw comparisons:

- *Otherwise, they must be responsible for studying alone, and they must have timetable to study carefully* [B7, Test 2].

As also exemplified by Student B7, complex sentences were also employed to give supporting details in the essays' classification:

- *That program is suitable for all people, because it helps people relax for all ages* [B7, Test 4].

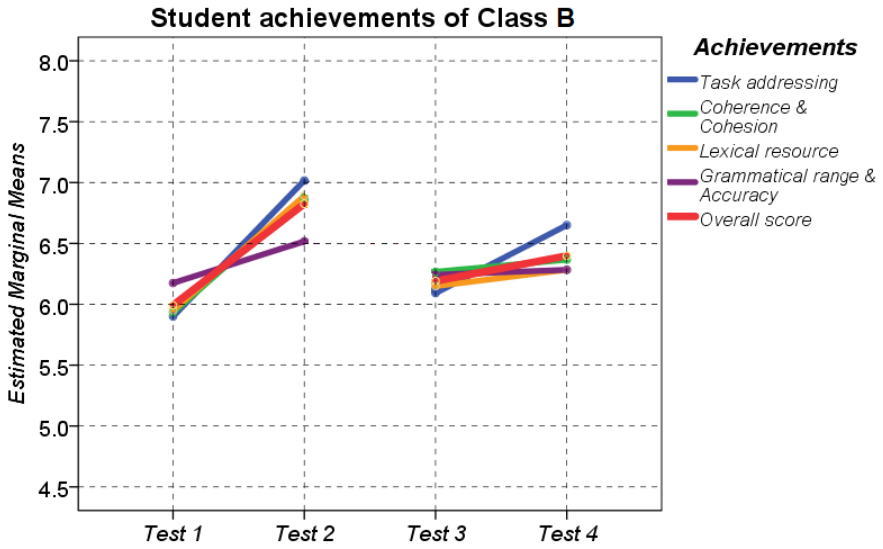
Although in both post-tests the sentences were varied in length and structure, there were more accuracy deficiencies in Test 4 of Phase 2, such as the use of prepositions and relative clauses (e.g., "*The program often has on TV at after working time, at weekend, time for meal . . . the time that people are free and together*"). The students seemed not to make any grammatical improvements in Phase 2.

5.7.2 Comparisons of Change Over the Phases

Using the four subskills outlined above, writing from each test was assessed across Phases 1 and 2. The results were plotted to illustrate the changes over time, with each subskill indicated by a differently coloured line showing progress between Tests 1 and 2, and between Tests 3 and 4. The graph of these results is shown in Figure 5.3.

The steepness of the lines indicates the level of improvement in the students' scores between the pre- and post-tests of each phase and over the interventions. All lines rise, indicating that the students made progress in terms of overall writing proficiency and across the subskills. The lower starting point in Test 3 reflects the students' lack of ability to apply these skills to a new text-type, classification essays.

Figure 5.3.
Student Achievements Across the Tests



As with Class A, the students in Class B made most progress in *task addressing*, and the least in *grammatical range and accuracy*. However, the steepness of the lines between Tests 1 and 2 indicates that in all aspects of writing, the improvements were much more substantial in Phase 1 than in Phase 2. To examine whether there were significant differences in the students' scores between the pre- and post-tests in each phase when the data are not normally distributed (see Appendix E.1-E.12), Wilcoxon signed rank tests of paired samples were conducted for Tests 1 and 2 and for Tests 3 and 4. The analyses reveal that the students improved considerably in Phase 1 (FC) in all the subskills (with all p-values less than 5%). When it came to Phase 2 (traditional approach), the statistical differences lay in *task addressing* ($Z = 2.762$, $p = 0.006$) and overall score ($Z = 2.816$, $p = 0.005$) (see Table 5.18).

Table 5.18.
Wilcoxon Signed Rank Tests for Pair Samples

Writing Subskills	***Phase 1***				***Phase 2***			
	Test 1	***Test 2***	***Z***	***p-value***	***Test 3***	***Test 4***	***Z***	***p-value***
	Mean (SD)	*Mean (SD)*			*Mean (SD)*	*Mean (SD)*		
Task addressing	5.96 (0.85)	7.05 (0.52)	**2.958****	**0.003**	6.14 (0.92)	6.68 (0.68)	**2.762****	**0.006**
Coherence & Cohesion	6.00 (0.89)	6.91 (0.58)	**2.842****	**0.004**	6.32 (0.78)	6.41 (0.70)	1.000	0.317
lexical resource	6.05 (1.27)	6.96 (1.04)	**2.848****	**0.004**	6.23 (1.10)	6.36 (1.23)	1.342	0.180
Grammatical range & Accuracy	6.27 (1.23)	6.59 (1.02)	**2.070***	**0.038**	6.32 (1.10)	6.36 (1.14)	1.000	0.317
Overall score	6.07 (1.03)	6.88 (0.74)	**2.938****	**0.003**	6.25 (0.94)	6.46 (0.90)	**2.816****	**0.005**

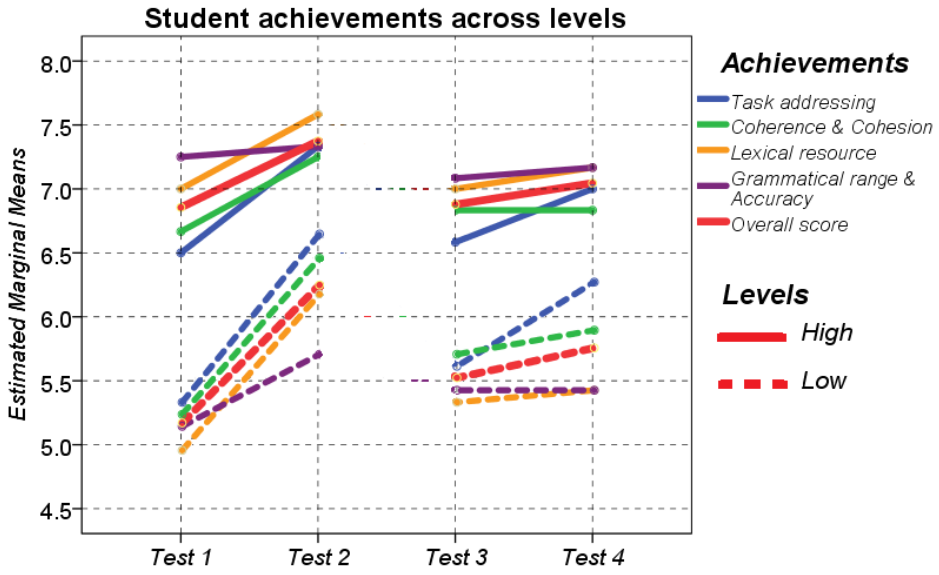
** **significant at the 5% level**, ** **significant at the 1% level***

This analysis indicates that Phase 2 occasioned a lower level of improvement than Phase 1 in all the subskills. To examine whether those differences were statistically significant, Rank ANCOVAs were applied. The results reveal significant differences between the two phases in terms of *task addressing* ($F = 11.263, p = 0.003$), *coherence and cohesion* ($F = 28.815, p = 0.000$), *lexical resource* ($F = 18.030, p = 0.000$), and overall score ($F = 23.845, p = 0.000$) (see details in Appendix C.13). The positive outcomes of Phase 1 imply that FC design of writing instruction has the potential to create a more supportive English learning environment. Although the diminishing trend of the students' improvements was noted in both all-flipped (Class A) and flipped-and-traditional (Class B) models, there were statistically significant differences in Class B data when the FC was not employed in the second stage. The diminution, in other words, was greater in Class B.

Differences Between Low and High Performers

To examine whether the intervention effects on student performance were uniform, the achievements of low and high performers were investigated. Similar to the trend reported for the whole class and for Class A, low and high performers made better progress in Phase 1 than in Phase 2 (see Figure 5.4). Both levels tended to improve the most in the *task addressing* subskill, and the least in *grammatical range and accuracy*.

Figure 5.4.
Student Achievements in Subskills Across the Levels



It is worth noting that the levels of improvement in all subskills of the low performers were greater than those of the high performers in both phases, except for *grammatical range and accuracy* in Phase 2 (see Table 5.19). However, the differences in terms of level of improvement between the low and high performers were not statistically significant when Rank ANCOVAs were computed.

Table 5.19.
Rank ANCOVAs for Writing Subskills of Low and High Performers

Writing Subskills	***Phase 1***				***Phase 2***			
	Rate of improvement		*F*	*p-value*	*Rate of improvement*		*F*	*p-value*
	Low	*High*			*Low*	*High*		
Task addressing	27.49%	13.31%	0.087	0.775	13.02%	6.94%	0.012	0.915
Coherence & Cohesion	25.33%	8.99%	0.031	0.865	3.64%	0.08%	0.008	0.932
lexical resource	27.33%	8.22%	0.018	0.897	2.22%	2.05%	0.001	0.970
Grammatical range & Accuracy	11.89%	1.19%	0.015	0.904	0.00%	1.19%	0.003	0.957
Overall score	22.90%	7.69%	0.042	0.842	4.70%	2.40%	0.008	0.931

The levels of improvement of the low and high performers in Phase 1 were higher than those in Phase 2, as indicated by the percentages of improvement in Phases 1 and 2 in Table 5.19. To examine whether there were significant differences within each group, Rank ANCOVAs were applied. The results reveal that the low performers made significantly better progress in *coherence and cohesion* ($F = 6.155$, $p = 0.038$), *lexical resource* ($F = 14.046$, $p = 0.006$), *grammatical range and accuracy* ($F = 6.332$, $p = 0.036$), and the overall score ($F = 8.118$, $p = 0.022$) in Phase 1 than in Phase 2. For the high performers, the statistical differences were noticed in *coherence and cohesion* ($F = 5.270$, $p = 0.045$) and the overall score ($F = 7.530$, $p = 0.021$) (see details in Appendix C.14).

As an important indicator of writing quality, the investigation into the students' *lexical resource* enables a fuller understanding of their writing improvements (Laufer & Nation, 1995). Text analyses reveal higher gains in Phase 1 than in Phase 2 in all aspects of *lexical resource* (except for metadiscourse markers). Three linguistic features – academic words, academic phrases, and metadiscourse markers – can be discerned in Table 5.20. While types indicate the number of different items, tokens describe the total number of words (Nation, 2001). Total types and total tokens represent the total number of different words and the word count in an average essay, respectively.

Table 5.20.
Descriptive Statistics and Wilcoxon Signed Rank Tests for Students' Lexical Resource Across the Tests

Students' lexical resource	***Phase 1***				***Phase 2***			
	Test 1	***Test 2***	***Z***	***p-value***	***Test 3***	***Test 4***	***Z***	***p-value***
	Mean (SD)	*Mean (SD)*			*Mean (SD)*	*Mean (SD)*		
Types of academic words	11.18 (4.38)	14.82 (5.93)	**2.226***	**0.026**	10.91 (3.67)	9.91 (4.32)	1.230	0.219
Tokens of academic words	23.73 (8.59)	24.00 (8.31)	0.102	0.919	12.82 (4.58)	12.91 (5.92)	0.207	0.836

Students' lexical resource	***Phase 1***				***Phase 2***			
	Test 1	***Test 2***	***Z***	***p-value***	***Test 3***	***Test 4***	***Z***	***p-value***
	Mean (*SD*)	*Mean* (*SD*)			*Mean* (*SD*)	*Mean* (*SD*)		
Types of academic phrases	5.18 (3.16)	8.09 (2.55)	**2.568***	**0.010**	6.73 (3.23)	7.73 (3.10)	0.937	0.349
Tokens of academic phrases	7.36 (4.07)	10.45 (3.59)	1.540	0.124	8.36 (3.44)	9.27 (2.87)	1.023	0.306
Types of metadiscourse	18.73 (4.88)	20.27 (3.74)	1.268	0.205	19.73 (4.59)	22.73 (4.63)	1.798	0.072
Tokens of metadiscourse	43.27 (15.15)	47.36 (9.55)	1.246	0.213	38.91 (8.54)	44.09 (10.16)	1.513	0.130
Total types	139.18 (22.33)	164.27 (20.40)	**2.667****	**0.008**	160.27 (28.10)	172.27 (19.05)	1.735	0.083
Total tokens	299.64 (84.11)	367.00 (23.13)	**2.045***	**0.041**	310.55 (58.94)	346.73 (56.44)	1.779	0.075

* ***significant at the 5% level,*** ** ***significant at the 1% level***

The improvements in the students' lexical knowledge were confirmed by administering a Wilcoxon signed ranks text, used in small sample cases such as this. The non-parametric statistical hypothesis test was deemed best suited to compare students' improvements in pre- and post-test data. Wilcoxon tests for Tests 1 and 2 reveal statistically significant differences in the types of academic words ($F = 2.226$, $p = 0.026$), types of academic phrases ($F = 2.568$, $p = 0.010$), total types ($F = 2.667$, $p = 0.008$), and total tokens ($F = 2.045$, $p = 0.041$). When no significant disparity is detected ($\text{p} - \text{value} > 0.05$), the means of the other lexical features of Test 2 are nevertheless higher than those of Test 1. These findings confirm students' lexical improvements in Phase 1 under the FC intervention.

When the pre- and post-tests (Tests 3 and 4) in Phase 2 were compared, there were improvements in almost all aspects (except for types of academic words). However, no significant difference was detected between these two tests under Wilcoxon signed ranks tests, which implies a lack of patent lexical improvements in Phase 2.

Phase 1 witnessed a significantly greater gain in academic words than Phase 2. To determine if there was a significant difference in the level of improvements between the two phases, Rank ANCOVAs were employed. The results show that students differed significantly in terms of the types of academic words ($F = 9.698$, $p = 0.005$) (see details in Appendix C.15).

Differences Between Low and High Performers

In terms of Phase 1 vocabulary, the low performers made less progress than high performers, except in the tokens of academic phrases. Again, Rank ANCOVAs were conducted to analyse those differences. The results in Table 5.21 show no significant differences between the low and high performers in Phase 1. In Phase 2, despite no gains in academic words, the low performers improved better in the other lexical

aspects than the high performers, especially in types of metadiscourse markers ($F = 6.248$, $p = 0.034$). The improved achievement in metadiscourse markers is comparable to Class A.

The low performers made better progress in terms of metadiscourse markers and word count in Phase 2 than in Phase 1. With regard to the differences in extent of lexical improvements across phases for each group (low and high performers), Rank ANCOVAs reveal a statistical distinction in word count of high performers between Phase 1 and Phase 2 ($F = 6.888$, $p = 0.025$) (see details in Appendix C.16). It is worth noting that for high performers, there was a decline in all lexical progress in Phase 2.

Table 5.21.
Rank ANCOVAs for Lexical Resource of Low and High Performers

Students' lexical resource	***Phase 1***				***Phase 2***			
	Rate of improvement		***F***	***p-value***	*Rate of improvement*		***F***	***p-value***
	Low	***High***			***Low***	***High***		
Types of academic words	33%	51%	1.288	0.286	-6%	-9%	0.400	0.543
Tokens of academic words	-15%	28%	1.618	0.235	-2%	7%	0.604	0.457
Types of academic phrases	102%	103%	0.235	0.640	41%	28%	0.999	0.344
Tokens of academic phrases	96%	54%	0.217	0.653	34%	14%	3.342	0.101
Types of metadiscourse	0%	25%	0.418	0.534	42%	1%	**6.248***	0.034
Tokens of metadiscourse	-4%	33%	0.004	0.953	32%	4%	4.621	0.060
Total types	18%	21%	0.066	0.803	14%	5%	0.161	0.697
Total tokens	18%	37%	1.398	0.267	25%	4%	4.222	0.070

* ***significant at the 5% level,*** ** ***significant at the 1% level***

The next section describes in greater detail the writing achievements of particular consistent and partial users. For each category of users, there are high- and low-performing students.

5.7.3 Achievements of Consistent and Partial Users

Further analysis of the achievements of the students in the consistent and partial user groups reveals that greater learning gains were made in Phase 1. The students with high degrees of engagement in online activities tended to achieve better in terms of *coherence and cohesion*, and *lexical resource*.

5.7.3.1 Consistent Users: Linh and Quoc. As described earlier, Linh and Quoc consistently engaged in the flipped learning activities of Phase 1, watching all the videos and completing all the

online tasks. Linh was classified as a low-performing student with her first essay score of 4.8, compared to Quoc's score of 7.8.

Linh

Linh's Test 1 essay comprised only one paragraph, yet over Phase 1 she learned how to organise her ideas and utilised more academic words in Test 2. She made substantial improvements in *task addressing*, *coherence and cohesion*, and *lexical resource*, her overall writing scores increasing from 4.8 in Test 1 to 6.3 in Test 2.

As shown in Table 5.22, Linh's Test 2 introduction had a better "funnel shape" (S. Baker, 1962), moving from general to specific topics.

Table 5.22.
Linh's Tests 1 and 2 Introductions

Test 1: Comparison essay	***Test 2: Comparison essay***
Which do people prefer? Face-to-face communication or online communication? And what's so different between them? According to researches, there are some signiJicant and specific diJerences between the two objects, but first, let's take a look at their similarities. [...]	*Time has changed like the way it is, even with the way we educate children. In term of teaching method, a question has been raised "Which one is the most effected, traditional classrooms or online classrooms". There are some similarities and diJerences between them are about to be discussed to find out.*

Linh's overall rates of improvement dropped from 31% in Phase 1 to 7% in Phase 2. For example, her essay organisation appeared to lose focus, failing to indicate a principle of classification when writing classification essays, in spite of her continued progress in *task addressing*. In Test 4 there were repetition ("educational programs") and more difficulties with grammatical accuracy (e.g., subject and verb agreement, as underlined). Her text is shown in Table 5.23.

Table 5.23.
Linh's Tests 2 and 4 Body Paragraphs

Test 2: Comparison essay	***Test 4: Classification essay***
Next is about the differences. One coin has its two sides. The first difference is about the controlling of time. When studying online, students absolutely arrange their time, whether they would like to study now or not. Everything is easier with a click. Learners can study whatever they want, whenever they want. They can even study while they lie on the bed. No more worring about an absence from class. Which means, to the tradition classrooms, absences are unacceptable. People have to sit in class, nice and neat, textbooks have to be with them all the time. They are force to study in time and to play in night time. If you get a cold or something that make you absent from class, it would be hard to catch up with other classmates.	*The second types is quite interest which people said it's boring. Educational programs always be said to appeared under documentaries, and it is easy to get sleepy. But the fact is accrurely different. Educational programs is not as that boring. It's true that documentaries is boring, but that are not just educational programs's only form. Educational programs are sometimes form under animated movies which help children know more about social life. Sometimes it is a film, a short one, which give adult more patient to watch the whole film and understand the meaning of it. Educational programs can be every films as long as it's attract your attention to watch it and gain the knowledge. After evening time watching it, people might feel thankful and have learned a lot.*

Quoc

In Phase 1, Quoc demonstrated improvements in all aspects of writing, especially in *task addressing* and *lexical resource*. His academic word usage in Test 2 accounted for 11.8% in comparison with 6.15% in Test 1. Comparing Quoc's Tests 1 and 2 introductions (see Table 5.24), Test 2 conformed more to academic essay organisation with some connecting information. He used a variety of academic words such as "controversial", "traditional", "debate", "efficient", "benefits" and "similarities" (in bold in Table 5.24).

Table 5.24.
Quoc's Tests 1 and 2 Introductions

Test 1: Comparison essay	***Test 2: Comparison essay***
*Online **communication** have been a part of everyday life since the birth of Internet and people are having less face-to-face*	*The **controversial** subject of **traditional** and online classrooms has been **debated** for years. Some people prefer traditional classrooms because it is*

Test 1: Comparison essay	***Test 2: Comparison essay***
communication than ever before. However, both of them have some ***similarities*** *and differences that one might surpass the other.*	*more* ***efficient****. Others believe online classrooms have more* ***benefits*** *over the traditional one. However, both kinds of classrooms have some differences and* ***similarities****.*

In Phase 2, Quoc improved in most areas, but there was a decrease in the amount of *lexical resource* with academic word (highlighted yellow in Table 5.25) usage of 4.03% in Test 4. In Test 2, he could communicate his ideas with better clarity and sophistication than in Test 4. Texts from the post-tests are shown in Table 5.25.

Table 5.25.
Quoc's Tests 2 and 4 Body Paragraphs

Test 2: Comparison essay	***Test 4: Classification essay***
Online classrooms have one big advantage over traditional ones; mobility. You are able to learn anywhere anytime as long as your devices are connected to the Internet. Whether you are in the park or at the coffee shop, you can easily access to your teacher's lectures. ***On the contrary****, traditional classrooms require your presence at your class in order to learn. The second difference is that online classrooms' lectures can be watched multiple times when traditional lectures can not. If you missed your traditional classes, you will not have another chance to revisit them.* ***However****, traditional classes offer the ability to directly interact with your lecturers in the mean time which online classrooms can not.*	*News programs are the most consistant type of program that have served its audiences for decades. People watch news programs to keep up with the present world. News programs are usually short, quick but packed with an enough amount of information, news. Programs like "60 Second News", "Morning news", etc are usually on air at 6 or 7 pm and 5 or 6 in the morning every day to make sure ones does not miss any important news of the day.*

It seems that with the FC in Phase 1, the consistent users Linh and Quoc created structured and flowing arguments, as well as achieving better in the subskill of *lexical resource*.

5.7.3.2 Partial Users: Chi and Hoang. As outlined earlier, Chi and Hoang had a similar pattern of online engagement in the FC, participating in some tasks and viewing activities, and they achieved better results compared to the traditional approach.

Chi

Chi made substantial progress in all subskills in the first stage of FC intervention with the overall scores of 4.9 in Test 1 and 6.5 in Test 2, shown in Table 5.26. The Test 2 introduction shown in Table 5.26

clearly set up the context and the importance of the topic. Although grammatical mistakes remained in the post-test, her ideas were better elaborated, and she provided a greater variety of vocabulary.

Table 5.26.
Chi's Tests 1 and 2 Introductions

Test 1: Comparison essay	***Test 2: Comparison essay***
The purpose of communication is express interaction between people and people. There are two popular type of communication people use the most are: face-to-face and online communication. There are similarities and differences between two types of communication that we should know.	*Nowadays, education is in advance more and more, especially in develop countries as: America, England, Newzealand, Singapore, . . . Traditional classroom isn't a part only of teaching in the universities, instead, online classroom have been applying and replacing for traditional classroom step-by-step. So, what does online classroom have advantages in teaching? In this essay, I clearly indicate at points similarities and differences between traditional and online classroom.*

In spite of Chi's progress in Phase 2, the subskills of *coherence and cohesion* and *lexical resource* were not as strong as those in Phase 1. The scripts from Tests 2 and 4 in Table 5.27 demonstrate how much better she used conjunction and reference cohesion (in bold) as well as academic words (highlighted) in Test 2 of Phase 1.

Table 5.27.
Chi's Tests 2 and 4 Body Paragraphs

Test 2: Comparison essay	***Test 4: Classification essay***
***However**, there are also many differences between traditional and online classroom. **For traditional classroom**, students have got to go to the classroom regularly to be able to make sense the lesson. **Unlike** traditional classroom, student who can be at home or absent a lesson still understand lecture because teacher have post file of information needed to study on classroom. It is a convenient points of online classroom. We can save time to do other things, **Furthermore**, in traditional classroom, student will learn passively while student will learn actively in online classroom.*	***The second type** of television programs is entertainment. **This type** of program is the most popular on television because it attracts many people belong many age groups: for children, they will watch channels like: cartoon, children music,. . . for teenagers and student, they will like certainly channels such as game shows, romantic films and musical video. About house-chore women and old people? They prefer watching long series film or programs which teach you how to cook delicious meals. The boys and fathers would like to watch sport program such as: football, tenis,*

Test 2: Comparison essay	***Test 4: Classification essay***
***For online classroom**, student can study much more than traditional classroom. **Moreover**, students will have accessibility a new method of the foreign classroom to help their studying effectively and advancely most.*	*motor race,... **In general**, this program will help people to satisfy their passion and hobby. **Moreover**, It also bring many joys for people to relax after hard working day.*

Hoang

Despite his resistance to the FC intervention, Hoang engaged in the FC activities and made considerable progress in addressing the task in Phase 1. Taking a closer look at his Tests 1 and 2 introductions (shown in Table 5.28), the latter conforms more to the structure of an introduction with a hook, connecting information, and thesis.

Table 5.28.
Hoang's Tests 1 and 2 Introductions

Test 1: Comparison essay	***Test 2: Comparison essay***
With the evolution of communicating devices, we human has also changed our way of exchanging information, from the simplest mean of communication: face to face talking to the most advanced method: online method. So what are the differences and similarities between them?	*Following the development of the human society, classrooms have changed and become considerably different from them in the old days. There are now two classrooms: thetraditional and the online ones. This essay will This essay will discuss the similarities and differences between them.*

In Hoang's Test 2 writing of Phase 1 (see Table 5.29), there was a better flow of ideas with the use of more transitions ("in fact", "however", "while", in bold). As may also be seen in the body paragraphs, academic word usage (highlighted) in Test 2 of Phase 1 was better than that in Test 4 of Phase 2.

Table 5.29.
Hoang's Tests 2 and 4 Body Paragraphs

Test 2: Comparison essay	***Test 4: Classification essay***
*Just convenience alone cannot make the two classrooms very different from each other. Their effectiveness to the students must always be important and worth-considering. **In fact**, there are students who enjoy online courses as they fit their*	*The first type of program of TV: entertainment ones are the most popular, they bring joy to the viewers after their tiring work and school. These programs vary from live shows to music and films,*

Test 2: Comparison essay	***Test 4: Classification essay***
*schedule or their habit of studying; **however**, there are also learners prefer traditional classes. The convenience of the two classes plays an important role to let students choose their best time from which the effectiveness improves. Students who are used to high focus tend to choose traditionals; **while** the other ones are chosen by slow learners.*	*from "Vietnam Got Talents" to "How I met Your Mother". **As** the targets of the programs are mostly kids and teens, the showing time for them are mainly at the evening and noon, in some rare cases, midnight.*

In summary, the students achieved significantly better results in Phase 1 than in Phase 2. Although both the low and high performers benefited from FC instruction and held a positive attitude toward the online component, the FC seemed to have more impact on the low performers. As with Class A, when compared to the traditional approach, the text analyses of Class B writing imply the prospective effectiveness of FCs in vocabulary learning gains in English Academic Writing. Through the FC, the students had more chance for language input and output.

5.8 The Teacher's Perceptions of FCs

As with Co Huong, Thay Tuan was also interviewed twice (after 5 weeks of the FC, and after reverting to the traditional model) to discern his perception change, if any. The coding of these two semi-structured interviews identified three themes similar to Class A: teaching readiness and workload; student learning; and teaching adaptation.

5.8.1 Teaching Readiness and Workload

Thay Tuan reported that although he had basic ICT skills, he had never used FCs before this research study. However, he found it similar to the way he assigned pre-class tasks for students' self-discovery when applying a top-down approach (i.e., starting with a big, abstract concept and working down to specific details):

- *Before the advent of flipped instruction, I often sent materials for students to read before class* [interview 1].

It is apparent that Thay Tuan believed pre-class input plays an important role in students' effective learning. However, echoing Co Huong's concern about workload, he recognised more commitment was required to prepare online materials in an FC:

- *I have five classes in this semester. The implementation of the flipped classroom has required a lot of time and effort, which, I think, wouldn't have been attainable without the cooperation with other teachers* [interview 1].

Given that the demand on teachers' time and energy in their existing teaching practice was already great, Thay Tuan hoped for additional staff and supportive policies to reduce the workload of FC teachers:

- *What needs most investment in making videos is mapping out the strategy and script. Teachers can surely make high-quality videos, provided that there are technical assistance and supportive policies from the university* [interview 1].

Despite the external barriers to FC implementation mentioned by both the teachers, Thay Tuan seemed to be more positive than Co Huong about teachers' competence in making videos.

5.8.2 Student Learning

Like Co Huong, Thay Tuan believed in the potential of FCs to provide ample opportunities for language practice in and out of class, which was lacking in current language classrooms:

- *Contact classroom hours is not sufficient to build language abilities. EFL learners generally do not have adequate opportunities to use English and are much less motivated to use English outside the classroom. FC approaches will make efficient use of class time for higher-order activities, and home time for meaningful interaction* [interview 1].

Thay Tuan also pointed out a misconception by students about classroom interactions with teachers. After the whole process, he held a more positive view about FCs in terms of meaningful output:

- *What students often regard as teacher-student interaction in a traditional classroom is, actually, teacher's transmission of knowledge. Flipped classrooms reduce teacher talking time and drive learners to produce output* [interview 2].

On reflection, Thay Tuan noted that his students were quite passive in the traditional classroom:

- *I know that although the students had problems in understanding, they didn't ask any questions* [interview 2].

FCs may provide the potential for teachers to increase the amount of two-way communication and get to know what students still find difficult. In addition, Thay Tuan suggested that FCs allow more time for peer and teacher feedback:

- *Despite students' uncertainty about peer corrections, they can learn from each other's strengths and weaknesses when reading their friends' writing. Teachers will then give students further suggestions to improve their writing* [interview 1].

Reflecting on both teaching models, Thay Tuan expressed a preference for FCs because the technological

use in FCs can accommodate more of the students' needs:

- *Students have different learning styles, and my teaching style might not suit all the students. Therefore, technology will help them find the most suitable and flexible way to learn* [interview 2].

In Phase 1, Thay Tuan emphasised the importance of learner autonomy in EFL writing and in the FC. However, he was not so sure about this class' autonomy, contending that not all students benefited from the FC:

- *The development of writing skill depends largely on learner autonomy . . . Although the students knew that I could check their online learning data, some did not complete the pre-class study, so they had trouble catching up with the in-class sessions* [interview 1].

Upon returning to the traditional model, he opined that the FC could precipitate an additional demand on students to take charge of their learning, and thus it might enhance their self-regulation:

- *What is good about the flipped classroom is that it turns learning process into self-regulated learning. In a traditional classroom, students don't learn anything if not going to class* [interview 2].

Like Co Huong, he also observed that, compared to previous intakes, the students of the 2018 intake had to face some drawbacks:

- *Because of the credit reductions, they are not properly equipped with grammatical knowledge and supposed to make more effort in a new integrated curriculum. As first-year students, they also struggle to adapt to a new way of teaching and learning which is totally different from their previous experiences of high school* [interview 2].

These constraints might have contributed to making the students' first encounter with FCs more challenging. Regarding the potential effectiveness of FCs, Thay Tuan shared the same view as Co Huong about cultural expectations in classrooms:

- *Vietnamese students get accustomed to being spoon-fed with knowledge . . . A good number of students have a bad habit of relying heavily on teachers . . . Without inquisitiveness, interest, and initiative, they cannot make much progress. Technology is just the means; whether they can succeed or not depends mostly on their ability* [interview 2].

Although Thay Tuan perceived FCs to be more effective than the traditional approach, he said it might take a long time to adapt to the flipped mode:

- *I can see some improvements in the students' learning outcomes, but not as much as I have anticipated. FC effectiveness might take years to take shape, and firstly, students need to change their learning habits* [interview 2].

Thay Tuan acknowledged the challenges when applying FCs in Vietnam and proposed an adjustment in teaching and learning cultures to optimise the flipped instruction. While students need to take charge of their learning, teachers also need to adapt to this new way of teaching.

5.8.3 Teaching Adaptation

In Thay Tuan's view, the future success of FCs requires its incremental implementation:

- *It would be better to, initially, have the course partly flipped to allow teachers and students more time of adjustment* [interview 2].

While Co Huong was concerned about the up-front investment, Thay Tuan brought up the idea of teachers being able to share resources. He said it would be useful to develop a database of lecture videos and other online resources:

- *Preparing flipped learning materials requires considerable start-up effort, but these can be reused and adapted for the next class. This database should be created synchronously by a group of teachers and among classes so that teachers can evaluate the effectiveness of the flipped classroom* [interview 2].

He anticipated that the trend towards online education would result in the provision of more teacher professional support:

- *Since 2016, the university has encouraged teachers to use Moodle in teaching. They also plan for MOOCs [massive open online courses] in the near future. I think, there will soon be new policies to assist teachers with online teaching* [interview 2].

Like Co Huong, Thay Tuan showed concern about Vietnamese students' ability to adapt to the new way of learning in FCs. Although he was aware of some external barriers such as time constraints and a lack of institutional support, his recognition of the pedagogical values of FCs resulted in more positive perceptions than Co Huong's. Interestingly, as the older and more experienced teacher, Thay Tuan was really thinking about FC implications for the profession, and he was more willing to adapt to the new-era changes.

5.9 Summarising Case Study B

The Class B analysis reveals patterns that were consistent with those of Class A in terms of students' positive attitudes to flipped learning and writing improvements in Phase 1. These were further

confirmed in Phase 2 when the students found that they missed the FC. The students' achievements were also enhanced by the FC, as may be seen in the way the Class B results improved in Phase 1 compared to Phase 2.

Unlike Class A, the low performers in Class B mostly had a stronger preference for FCs over traditional classroom instruction than the high performers. Under flipped instruction, the low performing students made better progress than the high performers in all the writing subskills. Reflecting on both teaching models, the Class B teacher, Thay Tuan, perceived the greater advantages of FCs in teaching EFL Academic Writing.

CHAPTER 6

Discussion

6.1 Introduction to the Chapter

This chapter discusses the effects of flipped classroom (FC) approaches on the participating students' and teachers' experiences and attitudes, as well as the students' achievements. The significance of this approach for students and teachers is discussed in relation to both the two classes/cases in this study and the existing literature. This chapter is organised around the research questions that have oriented this study. The overarching research question is:

> ***What are the effects of flipped learning on an EFL Academic Writing course in a Vietnamese higher education context?***

The three research sub-questions are:

(**1**) How do participating Vietnamese EFL students experience the flipped classroom?
(**2**) What are the effects of the flipped classroom on these students' achievements?
(**3**) What are the teachers' perceptions of implementing a flipped classroom approach?

Each sub-question will now be discussed with a view to learning how flipped learning experiences might inform language teaching practice in Vietnam.

6.2 Research Question (RQ) 1: Student Learning Experiences and Attitudes

Addressing the first RQ, *How do participating Vietnamese EFL students experience the flipped classroom?*, three themes emerged from close analysis of data, namely, access to and design of learning materials; amount and quality of interaction and feedback; and opportunity for self-regulation. These themes will be considered in relation to the experiences of the two classes studied.

The flipped classroom model used in this study made resources more readily available to students than had been the case in the traditional classroom. Both groups of students noted that the online scaffolded materials allowed for lesson preparation and more productive use of time. Some students commented

that an important facilitator in the FC was that they could review the lessons multiple times for better understanding and reflection. Responses to the post-questionnaires indicated that the students felt that by doing the pre-class work they were well prepared for the face-to-face sessions. To demonstrate the impact of this aspect of their learning, some Class B students reported that they missed the videos and online exercises for self-practice in the FC when the traditional mode returned. Student B11 conceded losing focus in the traditional classes, and Student B6 described her experiences without the FC as "*like entering into the battlefield with no weapon*". Other studies have noted that access to online materials is strongly correlated to students' satisfaction in preparatory study (Ramnanan & Pound, 2017), and can result in improved academic performance (Goedhart et al., 2019).

Studies into the effect of preparation work in a flipped classroom have had mixed results. While Missildine et al. (2013) and Strayer (2012) found that an FC did require extra student work outside the class, my study supports the findings of He et al. (2016) and G. B. Johnson (2013) that an FC did not increase students' overall study time. Most of the participating students, when undertaking flipped learning, did not exceed the expectation of 5 hours of personal study (as stated in the course outline); they mostly spent less than two hours studying online before class.

When asked if they were overloaded by the pre-class tasks, Class A students claimed that they had more exercises in the previous writing course than in the flipped classroom. During the traditional sessions in Phase 2, although there was less homework, most Class B students reported spending more time studying (3 hours or more) than in Phase 1 with flipped instruction (2 hours). Student B8 recalled expending extra effort to compensate for the absence of pre-class learning in the traditional model. Despite some participating students' complaints about workload in the FC, this study has shown no increased time requirements in the FC, compared to the traditional classroom.

The students appeared willing to access and interact with the practitioner-created videos due to the sense of familiarity they could feel when seeing and listening to their own teachers. One point that various students made in terms of these videos was that they found the accent of their teacher more familiar and comprehensible than those of other Vietnamese teachers (see Section 4.4). In the questionnaire responses, most students said they preferred practitioner-created videos to videos made by other Vietnamese teachers. This accords with the findings of Palmer (2015) and Quinn and Kennedy-Clark (2015) that teacher presence can enhance emotional motivation in online learning. Other research (Bond, 2000; A. F. Brown, 2018; Diperi, 2020; Malik et al., 2017) has also found that teacher presence in pre-recorded lectures and synchronous lessons can make students feel more closely connected and engaged.

Some students commented negatively about video production values, citing low volume or bad lighting in the first two videos, which discouraged them from watching other videos. Student B1 complained that

the insufficient volume made listening difficult, and Student B11 found it hard to maintain concentration on a low-light video. These videos were filmed in the university's digital learning room, which, as some students commented, was not as soundproofed and well-lit as the studio where the other two videos were recorded. Such aspects compromised student concentration and were similar to the negative effects of poor video quality on homework performance observed by Harrison et al. (2016) and Milman (2012). Videoing lectures needs good audibility and visibility, with clear lighting on the presenter and on the lecture slides (Snowball, 2014). The production of high-quality videos demands not only professional recording tools but also appropriate skills and sufficient time on the part of the teacher. In addition to pre-production planning and practice, the editing stage is important to ensure video quality and reusability in future courses (Peter et al., 2017).

For most students to have easy access to learning resources, the content needs to fit the available kinds of digital devices. In this study, the lack of desktops/laptops, along with problems in mobile learning, impeded several students' homework completions. The two non-users of online resources, who had only smartphones, commented on how inconvenient and time-consuming it was to complete the online tasks on a smartphone. Particularly with online writing materials, study via smartphones meant having to read very small font, deal with long passage-based tasks, and type with thumbs. The ergonomic disadvantage of keypads can limit both the viewing of content and textual communication (M. Wang et al., 2009).

There were also complaints about too many words and too much content online that might strain students' eyes, especially over extended periods. Some students found it hard to do some tasks such as Drag and Drop activities on a phone because it involved navigating and scrolling to view a long passage on a small screen. Besides the physical issues related to screen size and input methods on mobile devices, Students A5 and B3 expressed concerns about storage capacity, internet data, and costs associated with installing the applications, which align with previous studies (Anduja et al., 2020; Stockwell & Hubbard, 2013). Teachers should ensure tasks are developed in accordance with the affordances of various digital devices because the quality and design of pre-class learning materials may significantly impact student engagement and thus the success of FCs (Dooley & Makasis, 2020).

In a flipped language classroom, language proficiency can affect students' ability to independently interact with the online learning content. Some participants referred to difficulties in comprehending English videos due to their limited vocabulary. Although content created by non-native English teachers provides greater access by using the type of English and the context the students already know (McKay, 2003), the level of vocabulary in the videos was still challenging for some of the low-proficiency students; they requested English subtitles for all the videos. While in a language classroom, language should serve to facilitate deeper learning (Burns & Richards, 2012), low-proficiency learners have less ability to sustain engagement with material in the target language (Milman, 2012; Vitta &

Al-Hoorie, 2020).

This problem got worse in the traditional classroom when in-class lectures could not be played back. Some students found it challenging to understand Thay Tuan's lectures in English due to bad listening skills (Student B7) or unknown vocabulary (Student B4, whose estimated understanding level was 60%). Videos with L2 subtitles have been shown to assist students in vocabulary acquisition and overall comprehension (Baranowska, 2020; Winke et al., 2013). However, the simultaneous presence of subtitles with other visual-textual information (e.g., a teacher explaining a topic and a written summary) may induce cognitive overload (van der Zee et al., 2017). Teachers should consider students' language proficiency and content complexity when deciding the amount and sequence of subtitles to enable in a video.

Most of the participating students recognised the value of technology for language learning and chose to increase their use of it. Student A7, for instance, indicated in the questionnaire comment that the technologies such as educational apps and video lectures helped improve her writing. This finding corroborates those of Henderson et al. (2017) and Hopson et al. (2001) that students' improved perceptions of technological use resulted in their continuously using it as a learning tool. However, in my study, a small number of students were not engaged with the digital, video-based learning resources. Student A15 preferred preparing for the new lessons and practising writing in her own way, and Student B3 commented on the nuisance and distraction of online learning compared to learning from a textbook. These findings suggest that students with different learning preferences will react differently to a technologically rich learning environment, which are similar to the findings of Filiz and Kurt (2015). Several students also reported finding it hard to maintain focus and avoid online distractions such as social media or games. Educators should take into consideration that students studying online are more prone to distractions than those in traditional classrooms (Anduja et al., 2020; Reinders & Hubbard, 2013; Toto & Nguyen, 2009).

Although technology forms an integral part of most students' daily routines, some of the participating students lacked experience in using technology for educational purposes because they routinely used it for entertainment and communication. Some could not access their Moodle accounts or found it hard to log in to Edpuzzle to watch the videos. If students' technological skills fall short of course demands, their level of motivation can influence their focus and the amount of effort they invest (Abeysekera & Dawson, 2015). Without an apprenticeship in how to access and use the online materials, some students failed to learn effectively in the FC. For example, Student A19 did not know to pause and rewind the videos when commenting on the fast pace of a presentation (see Section 4.3). Student A21 admitted not doing further research to understand the lesson, even though it was possible for him to search and learn beyond what was presented. Students' incompetence in online learning was also observed by Aesaert et al. (2017); Ng (2012); and Valtonen et al. (2009). Hence it is important to equip

students with effective online learning strategies, given the increasing role of educational technologies in the digital age.

This finding hints at another risk with flipped classrooms or online learning: the presumption that students know how to take advantage of the online learning content. In the same vein, Talbert (2020) criticised the idea of "dropping videos on students" without giving guidance about how to learn from the videos:

> The problem with the "Read Chapter 3 before class" approach – or the "Watch this 20-minute video before class" approach – is that if you stop there and just give students content to consume, it assumes that students *know how to consume it meaningfully*. (online, emphasis in the original)

Although technology has eased the way a class is flipped, the focus of the flipped approach should be "a pedagogical change and not a technological one" (Mehring, 2018, p. 1). The flipped method requires more than moving lectures outside of class; it involves the strategic restructuring of course content and employment of active learning activities (Bergmann & Sams, 2012). Online activities must be meaningful and help to prepare students for the in-class lesson (O'Flaherty & Phillips, 2015; Tucker, 2012). Presumably because clarification options are more limited, online activities require more thorough explanation than in-class activities. Some participating students were confused about the instructions of the online tasks and thus discouraged from doing them. Teachers should give clearly defined and well-structured guidance with explanations and illustrations to help beginners in their online self-practice (M. K. Kim et al., 2014; Murphy et al., 2010).

Providing the means for the students to access and learn prior to class offered more opportunities for peer interaction in class. Being already well-equipped with the fundamental knowledge, the students could move immediately into interactive activities during face-to-face sessions. Student A20 commented on how she could take advantage of the pre-class input to actively participate in classroom discussions (see Section 4.6). To illustrate the different ways of working with the modes, Class B reverted to the traditional model in Phase 2, with face-to-face sessions returning to knowledge transmission and mechanical writing practice based on the coursebook. These students seemed to be less active, and they doubted the effectiveness of traditional lectures. Some even reacted negatively to this type of learning. In the post-questionnaire comments, they expressed dissatisfaction with the amount of interaction in the traditional classroom (see Section 5.6). Both classes viewed class time as well-spent during the FC with its increased employment of pair and group work.

The opportunity for interaction in the target language encouraged by the flipped classrooms enacts

Vygotsky's emphasis on the importance of meaningful social interaction, especially in language learning (W.-C. V. Wu et al., 2017). While class time in Vietnam is normally allotted for content delivery (V. C. Le, 2001), as seen in the second phase of Class B, for Vietnamese EFL students it is particularly important to use these classroom opportunities to hone their language skills since they have little opportunity to use English outside the classroom. With flipped learning, class time is devoted to language practice, which maximises the exposure to meaningful input and to opportunities for language output under guidance (Y. J. Han, 2015; Mehring, 2016).

The participants also found the quality of interaction to be one of the assets of the flipped classroom. Rather than lectures and mechanical practice, class time in the FC was used for discussions, student presentations, problem solving, collaborative writing, and peer editing, which helped develop the higher-level skills of Bloom's Taxonomy, such as analysing, evaluating, and creating (Forehand, 2010). In the traditional approach, knowledge is seen as transferable from the teacher to students via lectures, which can result in memorisation of facts (Ramsden, 1992). When the traditional model resumed in Phase 2, Student B8 noted the difference in approaches when she commented on "*the comfort zone*" of lectures (see Section 5.6), in which the students tended to be passive recipients of knowledge. Vygotsky (1978) identified that it is crucial for students' development to be challenged beyond what they have already learned, moving beyond what is known, into the zone of proximal development (i.e., the distance between what students can do independently and what they can only achieve with support). In returning to the traditional classroom, Student B1 reported that without pre-class study and collaborative activities he had difficulty dealing with questions at higher levels of thinking. This finding suggests that the flipped approach enabled a social environment (i.e., class time) for students working with the higher cognitive levels of Bloom's Taxonomy (K. Lee & Lai, 2017; Zainuddin & Halili, 2016).

The effective use of class time in flipped learning enhanced the opportunity for teacher-student interactions. The students were then able to obtain more support and clarification from the teachers during their writing practice. The teachers using FCs had more time to monitor students' group work and provide individual support when needed. This new role was evident in the teachers' classroom behaviours. In Phase 1, the flipped model, both teachers were observed walking around the classroom during the activities and offering help on an individual or group basis. By contrast, in the mostly teacher-fronted lectures in Class B in Phase 2, the students were observed to play the role of passive audience and rarely spoke up.

The students also found class time in the flipped classroom beneficial for questioning. According to Student A20, the teachers were more approachable for questions in the FC than during traditional lectures. In returning to the traditional mode in Class B, Student B7 reported being reluctant to ask the teacher in class and ending up confused about the lessons. Furthermore, Student B5 did not know who

to consult when having problems with writing homework. In a country with high power distance like Vietnam, students dare not question teachers and only speak when invited to do so (V. C. Le, 2004; P. M. Nguyen et al., 2006). FCs can provide students with more opportunities for question clarification and interaction with teachers during group work and in-class discussions. Increased teacher-student interaction in the FC was also found by G. B. Johnson (2013) and Snowden (2012), whose studies were based on the perspectives of Western students and teachers, respectively.

By optimising cooperation and support from peers and the instructor, the flipped classroom can act as an equaliser for lower-performing students. Speaking as a weaker student, Student A13 regarded lesson preparation in the FC an advantage for the reserved and less competent students (see Section 4.6). Because of their familiarity with topics before class, some low performers reported being more confident to "*step out of* [their] *comfort zone*" (Student A13) and participate in class activities. A pre-existing problem mentioned by Students A20 and A21 was their reticence to ask questions or join a discussion in a traditional classroom. To free up the pressure of instant responses and reduce speaking anxiety, the use of online tools such as Padlet and Google Docs allowed students to contribute ideas textually. This finding accords with those of Hsieh et al. (2017) and W.-C. V. Wu et al. (2017) that the online communication environment in the FC enables students to express themselves with more confidence. In addition, the online collaborative and in-class learning practices enabled the more proficient students to provide scaffolding and the teachers to offer individualised assistance at any time. The better preparation and immediate feedback from teachers and peers have been found to help low-proficiency students engage more in discussions and foster active learning in mixed-ability classes (Su Ping et al., 2020). Hence, the pedagogy reflects the constructivist theory of learning (Bergmann & Sams, 2012; Roehl et al., 2013).

Nevertheless, using the flipped approach resulted in a lack of interaction outside the classroom among the students and between the teacher and students, as was also found by Rivera (2015) and Sams and Bergmann (2013). In my study, some participating students reported having insufficient direction and feedback during their online learning. Although there was interaction with content such as video lectures, handouts, and automated feedback through the online platform, these students requested more online interactions between humans. The perception of having a learning community and available support in online platforms can dispel students' feeling of isolation (Muilenburg & Berge, 2005) and keep them involved and motivated throughout online learning (Garrison & Kanuka, 2004; Smoyer et al., 2020).

Another advantage of the flipped classroom is the enhanced opportunity for teacher feedback during the analysis and application stages. By reallocating time spent giving content in the face-to-face sessions, more class time is available for the teachers to provide feedback on students' writing. As revealed in the interview data, Student B8 valued how the teacher feedback in the FC helped advance her writing

skills. By contrast, when Class B reverted to a non-flipped format, the students noticed a decline in the teacher's detailed feedback. Student B6 was afraid that she could not improve much when the teacher just marked and gave general comments on her online submissions. That the students found it difficult to rely on self-evaluation is consistent with the view that in Confucian cultures students are often dependent on teachers for "the right answer" (P. M. Nguyen et al., 2006, p. 5). To develop writer autonomy, students should play a more active role in evaluating their own texts (I. Lee et al., 2019).

Despite interactive activities in online platforms, a flipped classroom might fail students' expectations of instant interaction/feedback from their teachers. Some of the participating students were dissatisfied with the fact that their online essays were not marked weekly. Some lamented missing the opportunity to ask questions while content was being unfolded. The automated feedback they received could only focus on low-level problems, and did not account for individual differences (Ranalli, 2018). Although the students were encouraged to bring their questions to the subsequent class, there was the risk that some might be too shy to ask them, and that the teachers could not go over every homework assignment in class.

The preparation activities in the flipped classroom offer students opportunities to contemplate questions before class and maintain more focus in class. Student B8 described her feeling in the traditional classroom that "*knowledge can't be soaked up*". However, in the FC, the frustration of not getting a teacher's just-in-time feedback and not understanding through automatic feedback has been found to lead to students feeling unprepared for the subsequent class session (Bhagat et al., 2016; Tecedor & Perez, 2021). This finding also confirms A. D. Mazur et al.'s (2015) finding that students prefer traditional lectures instead of online lectures because of teachers' instant feedback.

The flipped classroom freed up time for more peer feedback in both face-to-face and online learning environments. In the FC, the participating students were instructed to comment on each other's drafts based on editing checklists using online editing tools (e.g., Google Docs). On the one hand, they appreciated the opportunity to learn from their peers' ideas and mistakes; both teachers in this study clarified that the pedagogical reasons for using peer feedback were the promotion of students' reflection and the awareness of a good essay. On the other hand, the students remained uncertain about the quality of peer corrections. In their interviews, Student B11 recounted having his essay superficially reviewed, and Student B6 expressed her disagreement with how her new word usage was rejected. That the students did not trust each other's comments matches Ge's (2011) and Webb Boyd's (2008) observations. Despite benefits of peer feedback (see T. Chen, 2016; Hicks et al., 2016), the students indicated in their questionnaire responses that they preferred teacher feedback. Such a finding about student preference resonates with those of Ha and Nguyen (2021); M. Yang et al. (2006); and Zhang (1995), whose L2 participants mostly originated from Asian countries where teachers represent the ultimate source of knowledge. To enhance students' engagement and efficiency in peer feedback,

proper training should be conducted through the face-to-face and online modes of the FC, with the support of technological tools.

As first-year students, the participants struggled to adapt to a new way of teaching and learning that was totally different from their previous experiences of high school, and this might have contributed to making their first encounter with the FC more challenging. New undergraduate students have also been found to have lower levels of learning readiness and to prefer teacher-directed instruction than students in later years (Baxter Magolda, 2001). This supports the argument for apprenticeship into this more independent mode of learning. The disruptive nature of the global pandemic COVID-19 has rendered online learning not an option but a necessity. Within the context of the Vietnamese education system, a Confucian value such as teacher dependence needs to be challenged if the demands of the post-COVID world are to be met (Felix, 2021).

The flipped model is consistent with Vygotsky's (1978) constructivism paradigm in which students construct and make meaning of knowledge. However, students familiar with conventional teacher-fronted classrooms might initially shy away from FC model for fear of an added workload, as was found by M. K. Kim et al. (2014); Lage et al. (2000); and Missildine et al. (2013). As the students in my study were accustomed to the teacher imparting knowledge in class before being asked to practise, some found it hard to adjust to new FC routines of acquiring their own knowledge before class. That they were afraid of new roles and responsibilities in the FC mirrors the findings of Strayer (2012), although in Strayer's study, the participating American students were in introductory courses and thus had neither enough interest nor motivation. In Phase 2 of my study, a larger proportion of Class A students (19 of the 21) than in Phase 1 claimed to understand the lessons better under the FC. When they became familiar with flipped learning, they reported feeling more oriented and enjoyed the materials tailored for their skill reinforcement. This is in line with Mok's (2014) finding about the change in students' learning culture in the FC.

The flipped mode may therefore entail new learning and new habits of mind. To illustrate, the Class A students felt they were more committed to their homework completion than before flipped learning. When asked how the FC helped their study, Students A4, A9, A16, and A21 said they became more active in their learning and used their time more effectively. Furthermore, some of the residual effects of the FC were observed in Class B in Phase 2 (the traditional sessions). Class B students' engagement appeared to continue to improve from the FC intervention until the end of the course. They tended to become more responsible for their home study and more autonomous learners in class. Similar findings by Lockwood (2014) suggest that students become more autonomous learners by taking increased responsibility for their own learning process. A longer period of FCs might be necessary for students to habituate themselves to self-regulated learning, which Vietnamese students are usually claimed to lack (H. A. V. Nguyen et al., 2018).

Most of the students who undertook the FC tended to become self-regulated and take responsibility for learning, planning, monitoring, and evaluating their own learning process. Instead of having the teacher as the primary source of knowledge (P. M. Nguyen et al., 2006), the students were actively involved in the learning process in the FC. Student A1 stated that he tried to manage his time well so as not to miss any online lessons. Students B4 and B11 claimed they became more autonomous in preparing the lessons in the FC than in a traditional classroom. In both classes, the students found it satisfying that they could learn at any time and at their own pace with a variety of resources for intensive practice.

Due to the lack of self-regulated learning skills, some students did not find the transition to the new teaching mode a smooth one. Student A13 described his bewilderment during the transition from the traditional classroom to the FC, as he was not used to taking charge of his study. Students lacking self-regulated learning capabilities may encounter disadvantages in an FC (Y. L. Chen et al., 2014; Lai & Hwang, 2016), especially when the development of writing competence depends on their level of self-regulation (Graham & R. Harris, 2000). My study's results imply that it is important for instructors in an FC to prepare students with online self-regulated learning skills such as goal setting, time management, and assistance seeking. These skills are also valued in the workplace, given that organisations rely on learning to develop human resources (B. S. Bell, 2017).

While pre-class tasks can be customised according to learning pace in a flipped classroom (Akçayır & Akçayır, 2018; Bergmann & Sams, 2012; Muldrow, 2013; O'Flaherty & Phillips, 2015), the participating students still perceived low levels of control over the learning content. Although they could choose when and where to engage with the online materials, they tended not to take an active role in choosing what was the best for them. Over the FC intervention, their engagement in seeking improvements also seemed to decline. Bruff et al. (2013) contended that FC students take greater control of their own learning process than in a traditional classroom, and they pointed to FC flexibility in engaging with learning content. To enhance students' intrinsic motivation and learning engagement, Evans and Boucher (2015) proposed optimising student power of choice by providing them with relevant, meaningful, and competence-enhancing choices in appropriate proportions. Brooks and Young (2011) also noted that a student's choice-making ability is linked to motivation and enhanced academic development. It is important to communicate with students about the effects of FCs to empower them to control their own learning (Findlay-Thompson & Mombourquette, 2014; Strayer, 2012).

Decline in student engagement with online instructional materials is to be expected over continued use of a flipped classroom. After the first stage of the FC, the Class A students commented on being more active in their study through completing their homework before class and asking questions to help them learn. Despite their positive attitudes towards online learning, in the second phase there was a decline

in their commitment to the online materials. According to the interviewees, more students failed to complete the online activities due to workload from other courses. Login analytics from Edpuzzle and Moodle revealed that students only viewed the videos once, together with reduced fulfilment of the online practice. These findings are consistent with those of Xie's (2019) research into the diminishing marginal utility of FC in respect of students' viewing video lectures and undertaking online activities.

The law of diminishing marginal utility, an economics theory of consumption, would say the novelty of technology-enhanced instruction might at first intrigue and motivate students, but then diminish over time (K. R. Clark, 2015). In my study, the theory would explain the students' dwindling dedication to pre-class tasks during the continued application of the FC. Some were excited to engage in the FC at the beginning, but the sustained demand for self-regulated learning dampened their enthusiasm for this approach by the end of the course. Others who were less successful also found the self-regulation required by the FC to be frustrating, and they had difficulty navigating the before-class tasks. It can be speculated that those with low motivation and poor self-regulation may be susceptible to negative emotions when learning independently online in an FC. This finding about students' mixed feelings in the FC echoes those of Moran and Young (2014).

Attitudes to learning can also shape behavioral intentions and contribute to learning effectiveness (Getie, 2020). The flipped learning experiences resulted in the participating students' attitudinal changes and cultural shift to more active learning. The positive effects of the FCs on student learning motivation were more evident in Class A (all-flipped) than in Class B (flipped-and-traditional). The Class A students described themselves as more motivated for English Academic Writing (EAW) and more engaged in their learning. However, there were declines in their motivation to write and their homework commitment in Phase 2. While the Class B students accorded prominence to the benefits of before-class tasks in better preparing for the FC lessons, they tended to become less positive in terms of writing motivation and perceived effectiveness of lexical improvements (vocabulary and collocations) in the FC (see Tables 4.10 and 5.9 for the diminishing returns).

Flipped writing instruction might not result in significant changes in students' attitudes to the writing subject. Although the students in both classes appeared to be more positive about their study over time, writing motivation was found to remain instrumental (i.e., driven by extrinsic outcomes such as gaining a reward or avoiding a consequence) under the FC approach. Neither class demonstrated great willingness to write for pleasure or in the absence of formal assessment. Although the students had been advised that their online learning data would be checked, the teachers still noticed some students failing to complete the tasks before class. Some students' minimal efforts (e.g., posting brief replies on Padlet) merely to complete course requirements might represent a surface-level learning strategy. It would have taken considerable drive and self-regulated learning for the students to commit to the desired level of engagement in the FC (He et al., 2016).

The finding that flipped courses have no significant effect on students' learning motivation aligns with that of Tse et al. (2017). As for the possible underlying reasons for this low level of motivation, Zou (2020) has emphasised how students' low self-regulation levels might result in demotivation if there is a perceived increase in workload: "the workload may seem greater, and the tasks may appear more daunting" (p. 225). The results of this study suggest that students need to be self-motivated to prepare for FCs, which confirms the findings of Birgili and Demir (2022) and Smith (2015). Consistent with an extrinsically driven approach, Co Huong recommended using score bonuses as encouragement and score minuses as punishment for students' learning behaviours.

The overall perceived effectiveness in English Academic Writing was noted in the flipped classrooms, with Class A students perceiving higher overall writing progress than Class B. The Class A students tended to engage more in home practice than those in Class B, and they noticed some improvements in lexical usage, which had caused them the most trouble prior to the FC intervention. For Student A2, lots of grammar and vocabulary practice were provided in the flipped mode, and for Student A12, online material such as collocations and patterns of organisation helped improve her writing skills. Despite no significant differences in Class B students' attitudinal changes on returning to the traditional model, Student B4 showed her concern that "*learning the old way will not enhance writing skills*". Such perceptions of effective learning in the FC have also been found by Hsieh et al. (2017) and Nouri (2016).

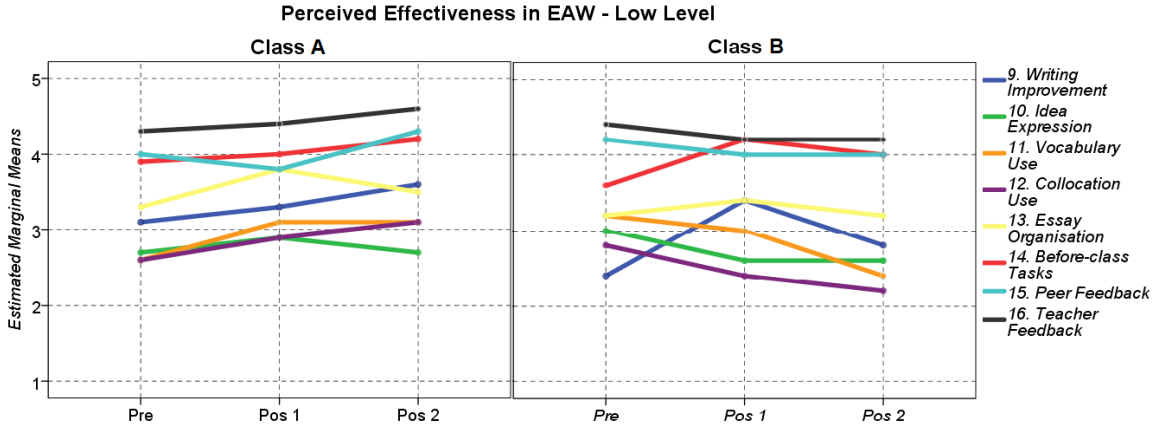
In both classes, there was a correlation between their online engagement and higher positive attitudes toward the writing subject. To be more specific, the regular online learners reported being motivated to learn, and they perceived improvements in their essay organisation and vocabulary use. By contrast, the non-users of online materials, although valuing the benefits of FC increasingly over time, perceived little progress in their writing. Such perceptions were comparable to their actual improvements, as indicated in the writing test results.

The flipped learning environment resulted in more positive attitudes in struggling students than the lecture-based classroom. The low performers tended to benefit from the pre-class work and take an active role in the FC. As demonstrated in Chapter 4, Class A low performers tended to become more excited to learn and more active in their study, and they perceived peer editing to be more effective than they had under previous traditional approaches. And as shown in Chapter 5, Class B low performers reported more favorably on the effects of the FC compared to the traditional classroom. The next sub-section compares the attitudinal changes of the low and high performers between the two classes using Rank ANCOVAs.

Comparison of the Attitudinal Changes of the Low and High Performers

This study incorporated a pre-test/post-test design and analyses of covariance (Rank ANCOVAs), which enabled evaluation of the magnitude of differences in student perceptions before and after the FC intervention. The results suggest that most statistical differences occurred in the low performers' perceived effectiveness of FCs (see Appendix D.1). Figure 6.1 illustrates the patterns of change in the low performers' perceptions (Items 9 to 16 in the questionnaires). An upward incline indicates improvement in their perceived effectiveness perceptions and a downward incline correspondingly indicates regression.

Figure 6.1.
Low Performers' Perceptions of Effectiveness in English Academic Writing (EAW)



As can be seen in Figure 6.1, when it came to using the different approaches in Phase 2, Class A low performers tended to perceive more effectiveness in terms of writing progress (Item 9) and lexical usage (Items 11 and 12) than Class B low performers. The better effect of FCs on low performers' perception of effective learning is similar to Nouri's (2016) findings and contrary to Owston et al.'s (2013). However, Nouri's (2016) study did not incorporate a pre-test/post-test design and Rank ANCOVAs. While Owston et al. (2013) has argued that low performers might not be able to undertake blended learning to their best advantage, the struggling participants in this study seemed to benefit from the self-paced learning afforded by the FC, finding traditional lectures challenging and fast-paced (Young et al., 2009).

Students' perceptions play a crucial role in EFL teaching and learning(C.-M. Chen, Liu, & Huang, 2019). A consistent pattern in the findings across Classes A and B is that the students' positive perceptions of the EFL flipped learning remained unchanged after the two intervention phases (see Chapters 4 and 5). Those students who consistently engaged in online activities perceived themselves more capable of successfully engaging in the learning process in the FC than in the traditional classroom. The Rank ANCOVAs for the perception changes of the low and high performers also revealed no statistical differences between the two classes in each phase (see Appendix D.2). This

result implies that the FC instruction might provide students with a positive learning environment, thus motivating them to be more active and engaged in the writing process. Learner satisfaction with a learning management system can be a condition for blended learning effectiveness (Kintu et al., 2017).

The adoption of flipped learning in L2 EAW classes allowed for interaction and feedback through engaging in high-order learning activities. The FC tended to foster better learning motivation and engagement of the low-performing students. These findings resonate with much of the literature on students' positive perceptions of the FC.

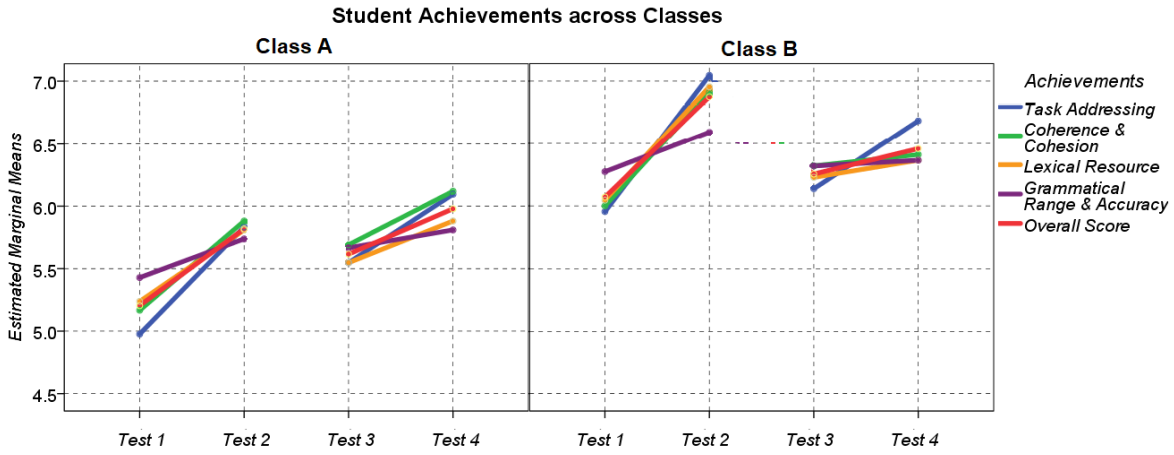
6.3 Research Question (RQ) 2: Student Achievements

The second RQ is *What are the effects of the flipped classroom on these students' achievements*? Few studies have employed a robust scientific method to verify the efficacy of the FC model (O'Flaherty & Phillips, 2015). The current study enabled a more thorough examination of student progress in four writing subskills – *task addressing; coherence and cohesion; lexical resource*; and *grammatical range and accuracy* – as well as overall score. This section details how the flipped learning experiences affected student writing achievements by comparing the data from the two classes quantitatively and qualitatively.

Substantial progress was noted in writing production and quality in the flipped phases, as opposed to the non-flipped phase. Although there were improvements in both classes, the results indicate better rates of progress during the FC phases. Across the writing tests, the students tended to produce considerably more extended texts in post-teaching compositions and to become more competent in specific writing skills at word, sentence, and paragraph levels (see Sections 4.7 and 5.7). In Class A, there were statistically significant differences in the students' scores between the pre- and post-tests, with no significant effect fade-out across the two FC phases. However, in Class B, the extent of writing improvements varied significantly when the two FC phases and the traditional approach were compared. Although Class B improved more than Class A during Phase 1 with the FC, Class B's progress was less substantial upon returning to the traditional model in Phase 2. The level of improvement in the students' scores between the pre- and post-tests of each phase and over the interventions is indicated by the steepness of the lines in Figure 6.2.

Although learning gains were noted in both classes over the phases, Rank ANCOVAs revealed that in Phase 2, Class A with the FC model made significantly better progress than Class B with a traditional model, in terms of *coherence and cohesion* ($F = 6.177; p = 0.019$), *lexical resource* ($F = 4.019; p = 0.054$), and overall score ($F = 4.062; p = 0.053$) (see Appendix D.3). These findings corroborate earlier studies conducted in other settings on the effects of an FC as opposed to those of a traditional classroom (Ayçiçek & Yanpar Yelken, 2018; Tsay et al., 2019; Webb & Doman, 2020). While recent L2 education research indicates that the FC approach can improve student writing

Figure 6.2.
Student Achievements in the Subskills Across Classes



performance (P. Lee et al., 2019; W.-C. V. Wu et al., 2020; Zou & Xie, 2019), my study provides an analytic view of the participating students' areas of improvement.

Of the four writing subskills, the most notable improvement in both classes occurred in *task addressing*. The students in Class B achieved better progress in *coherence and cohesion* and *lexical resource* during the FC phase than during the traditional phase. Text analyses of student essays using Text Inspector revealed significant progress in Class A students' use of academic words, phrases, and metadiscourse markers across their essays (see Section 4.7.2). In Class B, Phase 1 (the flipped phase) yielded considerable gains in terms of the types of academic words as opposed to Phase 2 (the traditional phase) (see Section 5.7.2). It is conceivable that as students were exposed to more language input and more practice in essay planning in the FC, the scores of the vocabulary and organisation improved accordingly. These findings support those of Leis et al. (2015) and W.-C. V. Wu et al. (2020) about the increased quantity of words and quality of writing elements under an FC. The positive outcomes of the FC intervention in my study imply that flipped learning has the potential to create more exposure to vocabulary and writing practice for improvements in English writing.

In both classes, the least progress was sustained in the subskill *grammatical range and accuracy*, which could have resulted from the absence of an explicit focus on this area during class time. Because of the reduction in grammar course credits and the associated reduction in course duration, there was no class time for explicit grammar teaching. The students were required to attain the necessary grammatical knowledge through independent online practice. Although technology in an FC can help deliver explicit grammar instruction outside of class via lecture videos (Bulut & Kocoglu, 2020), online individual practice of the participants in this study appeared insufficient for significant grammatical improvement. This finding also points to the benefit of explicit grammar instruction to language learners (Dixon et al., 2012; Ellis, 2006; Friedman, 2007; Nazari, 2013).

It became apparent that the students who were less engaged in before-class tasks (as indicated in the

learning analytics) were often less successful in achieving the learning outcomes. Motivation and the ability to work independently has been noted to be vital to success in a blended learning environment (Wichadee, 2018). As a common trend in both classes, the students who performed best in terms of total word use were consistent or partial users of online learning resources. They were able to bring their vocabulary knowledge into active use in writing and better organise the texts using more metadiscourse markers.

My study was also interested in which of the student populations achieved most from the two methods. The descriptive statistics revealed that under the FC phases, the improvement of the low performers exceeded that of the high performers in all aspects of writing. Rank ANCOVA results revealed more statistical differences in the progress of low performers across the classes (see Appendix D.3). However, in terms of the lexical progress of each level across the classes, no statistical differences were detected in each phase, except for the higher gain in academic words of Class A high performers in Phase 2 using the FC (see Appendix D.4). This finding about the positive effects of FCs on low performers is similar to those of M. D. Ryan and Reid (2016); Sergis et al. (2018); and S.-C. Yang et al. (2019).

With more scaffolding activities and recursive practices of writing in an FC, low performers gradually developed a higher level of awareness of the textual patterns. In previous research, low performers in a traditional classroom were found to receive insufficient attention from the teacher, which often resulted in poor achievement (Cooper & Good, 1983; Rosenthal & Jacobson, 1968). The FC approach addressed this obstacle since weak learners could view videos or read assigned material as often as necessary, and "homework" was attempted in class with the teacher clarifying the difficult concepts that these learners might ask about. Findings on the effects of FCs on different academic profiles have been varied (He et al., 2016; P. Lee et al., 2019; Setren et al., 2019); these differences possibly due to the different learning content, the instructional tools, or the capacity of the FC instructors. My findings suggest that FCs might be a promising pedagogical approach to bridging the achievement gap over time, with less competent students benefiting more from an FC than more competent students (S.-C. Yang et al., 2019).

It might be conceded that high-performing students perhaps had narrower scope for writing improvements due to their pre-existing higher performance levels. In this study, the cut-off points to classify high and low performers (students above and below the 50th percentile of Test 1 median scores) were, respectively, 6.12 and 4.20 in Class A (all-flipped), and 6.86 and 5.13 in Class B (flipped-and-traditional). These scores, though double-blind marked based on the course's designated writing rubric, might be subjective and were therefore treated with caution. The achievement test score distribution was quite similar between the two classes, and there was still scope for writing improvements. Taking a closer examination, the low-level group maintained their writing progress throughout the two phases of FC, while, in the case of the flipped-and-traditional model (Class B), the upswing of the low-level

group weakened considerably in Phase 2 using the traditional approach.

The students' diminishing improvement trend was noted in both Class A and Class B models, with greater diminution in Class B than in Class A. No heterogeneity between the two phases was detected in Class A, which implies no significant effect fade-out in Class A throughout the FC intervention. The small diminishing effect in Class A's progress might result from those students' lower commitment to pre-class study in Phase 2 due to pressure from other subjects, which normally happens towards the end of a semester. However, there was a statistically significant decline in Class B's writing progress when the FC was not employed in Phase 2. Text analyses also revealed considerable drops in the types of academic words and total tokens Class B students used in Phase 2 (traditional), in comparison with Phase 1 (FC).

It was possible that the explicit instruction in genre and the students' involvement in the writing process had helped the students produce genre-specific texts with more appropriate content and organisation. With the application of the FC along with the process-genre framework in this study, the students had more opportunities to collaboratively generate ideas and revise multiple drafts based on peer and teacher feedback, which resulted in significantly better progress, compared to the non-flipped model.

6.4 Research Question (RQ) 3: Teacher Perceptions of FCs

To promote the implementation of flipped classrooms, it is critical to understand instructors' experiences and perceptions related to the FC model (T. Long et al., 2020a). This section addresses the third research question: *What are the teachers' perceptions of implementing a flipped classroom approach*?

Both participating teachers, Co Huong and Thay Tuan, acknowledged some benefits of flipped classrooms, particularly for teaching writing. They said that as students gained access to the key content and vocabulary input before class, there was more class time for their writing practice and the teacher's detailed feedback. Teacher perceptions of the FC effectiveness became more manifest in Phase 2 when Co Huong continued implementing this approach in Class A, and Thay Tuan reverted to a traditional one with Class B. However, neither teacher gave a definitive answer on the impact of the FC on students' writing achievements, which is a similar finding to that of Snowden (2012).

The teachers' pedagogical beliefs might have resulted in their different perceptions of flipped classrooms. Co Huong, who already had a more interactive classroom style, did not perceive significant effectiveness in the FC and felt reluctant to apply FCs in her future classes. Eteokleous (2008) found similarly that "if teachers believe that their traditional practice is reasonable, effective, and efficient, they are likely to resist implementing computer innovations" (p. 683). Meanwhile, Thay Tuan's belief in the value and relevance of using instructional technologies could have determined his preference to use them in future instruction, which is consistent with the findings of Y. Lam (2000) and Spotts (1999). If a new pedagogy is compatible with teachers' existing beliefs, the teachers are more likely to

accept it and adopt it in classroom practice (Faez et al., 2011; Hollingsworth, 1989; Munby, 1982).

The teachers' views of their students led to their low confidence in the students' ability to use the flipped learning mode well. To both Co Huong and Thay Tuan, Vietnamese students, influenced by Confucianism, are non-autonomous learners, teacher-dependent, reluctant to ask questions, and extrinsically motivated. In Thay Tuan's words, Vietnamese students are used to "*being spoon-fed with knowledge*" and reticent to ask questions in both traditional and flipped modes. In collectivist-oriented cultures such as Vietnam's, students asking questions is often considered disruptive to teaching (Littlewood, 1999), and they are afraid of losing face for raising foolish questions (Joy & Kolb, 2009). Students also avoid challenging a teacher for fear that the teacher would lose face by being unable to answer a question (Y. Xu & Davidhizar, 2005). The interview data of my study revealed that the teachers lacked trust in their students' abilities to take charge of their own learning, which aligns with the finding of V. L. Nguyen (2016) about Vietnamese university teachers' assumptions. Both Co Huong and Thay Tuan said that online learning should be closely monitored in the early stages of an FC implementation. This kind of supervision would require more of the teachers' time, particularly if classes are large. In charge of 21 students in Class A, Co Huong was already finding it hard to provide immediate online support.

Adaptation is necessary as flipped learning may not work with students from other traditions (Filatova, 2015). While knowledge transmission has been a deep-rooted pedagogy in Confucian heritage contexts like Vietnam, the recent implementation of FCs is profoundly influenced by Western education culture featuring constructivism and active learning. Co Huong and Thay Tuan suggested an incremental implementation of FCs so that teachers and students would have time to adjust their teaching and learning habits, which is consistent with Mok's (2014) findings. They recognised that accommodations during the transition, such as time allocated for teachers' associated preparation and apprenticeship, were needed.

Through classroom observations, Co Huong and Thay Tuan appeared to be competent in terms of their pedagogical and content knowledge (PCK); they knew how to employ appropriate techniques to teach different writing genres. However, they indicated they would have been less confident about technological innovation without the assistance of the researcher. They indicated in the interview that they would feel better prepared to implement technology if they had adequate technical support. Although both had undergone some training in technological integration, they admitted, prior to the study, having no experience in making video lectures. They needed technical support in filming and editing the videos. Co Huong worried that the FC mode demands a lot from the teacher, including skills that teachers are not necessarily adept at. N. T. Hoang (2015) has also noted that Vietnamese EFL teachers are mainly trained in English teaching methodology, but not well trained in educational technologies.

While acknowledging the benefits of self-created videos in flipped classrooms, Co Huong and Thay Tuan were mostly concerned about the extra workload and substantial time investment involved, compared to a traditional approach. As did J. Campbell et al. (2014), they found it time consuming to produce a quality flipped video. Co Huong, for instance, reported spending three hours on the first 8-minute video, not to mention the editing stage. Although the expense and time spent on creating online videos and tasks were supposed to be "a one-time start-up expense" (Talbert, 2014, p. 372), Co Huong commented that they would still need updating to suit future student abilities. Thay Tuan, however, suggested collaborating with other teachers of the same discipline to overcome the workload challenge. The existing literature also contends that teachers can make use of shared lesson plans, course materials, and readily available resources (Çevikbaş & Argün, 2017; T. Long et al., 2020a). Teacher workload can be alleviated by reducing the number of classes and other duties, and deploying more teaching assistants to monitor online activities and technical assistants to provide IT support.

In line with studies by Egbert et al. (2002) and S.-C. Yang and Huang (2008), my study has demonstrated that factors such as resources, training, technical support, and time constraints can be external barriers to a teacher's use of technology for instructional purposes. There is also evidence that teachers' perceptions of such external barriers, and their institution' efforts to address them, directly predict their beliefs and attitudes, thus affecting internal barriers to technology integration (Miranda & Russell, 2012). Co Huong expressed concern about the availability of required technological tools and good wireless access on campus and doubted whether the benefits of FCs would outweigh the costs. Despite claims about re-using and easily adapting the materials of FC (Arnold-Garza, 2014), its cost effectiveness is still heavily context-dependent (van Alten et al., 2019). In contrast, Thay Tuan anticipated that the trend towards online education would result in schools providing more teacher professional support.

In regard to teachers' capacity building, professional development programs should not be designed merely to familiarise teachers with new technologies because "adding wings to caterpillars does not create butterflies" (Marshall, 1995); they should connect with teachers' actual practices (T. Wang, 2017).

6.5 Summarising the Chapter

This chapter discussed how FCs fostered the participating students' learning by drawing on the students' experiences, the teachers' and students' perceptions, and the students' achievements. The results of comparing the two classes under different FC interventions suggest significantly higher positive effects in the fully flipped class. The lower-performing students, in particular, reported benefitting more from the flipped instruction. However, both the teachers and students needed to adjust, as well as see for themselves, how the FCs could play a role in optimising language learning environments. Chapter 7, the final chapter of this thesis, presents the conclusions drawn from this research.

CHAPTER 7

Conclusion

This thesis contributes to both the associated literature and practice within the flipped EFL classroom. Using social constructivism as a theoretical framework and a mixed methods case study design, the current study empirically investigated teachers' and students' attitudes to flipped classroom (FC) approaches and any effect on learning achievements, specifically in an EFL Academic Writing course. This final chapter summarises the main findings and their relationship to the study objectives. In addition, it discusses the study's contributions, limitations, and recommendations in relation to future research and with regard to the applicability of the instructional design of FC.

7.1 Summary of the Main Findings

This thesis examined the effects of flipped learning on an EFL Academic Writing course in a Vietnamese higher education context. With the participation of 32 English major students and two of their teachers across ten weeks of their writing course, two FC models – all-flipped, and flipped-and-traditional – were applied in two classes to investigate any significant changes in the teachers' and students' perceptions, and in student learning outcomes. Triangulation was employed through pre- and post-questionnaires, class observations, teacher and student interviews, and writing pre- and post-tests. This process sought to answer three research questions, namely:

(**1**) How do participating Vietnamese EFL students experience the flipped classroom?
(**2**) What are the effects of the flipped classroom on these students' achievements?
(**3**) What are the teachers' perceptions of implementing a flipped classroom approach?

7.1.1 Experiencing the FC

Quantitative and qualitative analyses indicated that the FC approach affected students' perceptions positively due to access to learning materials, enhanced interaction and feedback, and opportunity for self-regulation. Despite various previous findings about the amount of pre-class work (He et al., 2016; G. B. Johnson, 2013; Missildine et al., 2013; Strayer, 2012), this study revealed that the flipped instruction did not appreciably increase students' overall workload. Most of the students reported

spending less than two hours on online study, which did not exceed the required time for home study (five hours). The essence of the FC approach lies in the flexibility and individualisation of the learning process in which students chose the time and place to learn, as well as the best strategies that worked for them. According to the questionnaire comments, the respondents held positive attitudes toward the practitioner-created videos and those professionally made by native speakers.

The underlying pedagogy of the learning design was based on Vygotskian principles (Vygotsky, 1978), which offered collaborative learning experiences that advance students' use of the target language and enable scaffolding from the teacher and peers. While there were a small number of students expressed a preference for attending traditional lectures instead of watching online lectures, citing the missed opportunity to ask questions when the information was initially presented, most students appreciated better opportunities for interaction and feedback in face-to-face sessions of the FC. One emerging issue was that students noted the need for more human interaction in conjunction with their online study, suggesting that a sense of community is of great importance in students' learning engagement.

The design of the FC activities provided the opportunity to engage in varied types of cognitive work. In light of Bloom's revised taxonomy (Anderson & Krathwohl, 2001), the time spent outside of class required lower-order thinking skills of remembering and understanding found in the presentation of vocabulary and grammar. Tasks such as discussions, problem-solving, writing practice and peer review that required higher-order thinking skills of applying, analysing, evaluating and creating were moved to face-to-face sessions, enabling more opportunities for language production and detailed feedback during contact hours. In response, the students indicated their satisfaction in preparatory study and confidence to participate in class activities, as opposed to their experiences in a traditional classroom. Although some students showed initial resistance to the change in the classroom approach due to previously established passive learning habits and dependence on teacher directions, comments from the students about steps they took to organise their time to view lectures and complete activities prior to class indicated that such learning design assisted them in becoming more responsible for their learning.

Despite claims for flipped learning to increase student motivation (McLaughlin et al., 2014; Strayer, 2012; Zou et al., 2020), the results of this study showed that students' motivation remained mostly instrumental but could nonetheless lead to a desired outcome. Students' responses to the post-questionnaires indicated that they became more committed to fulfilling the pre-class work once they perceived the effectiveness of the FC. Through the analysis of students' online engagement patterns, it became clear that variable levels of student engagement with pre-class work led to variability in student preparedness, and hence ability to actively participate in the class activities. Although, near the end of the course, the students' commitment to homework tended to diminish, they acknowledged the role of online flipped learning in assisting with their lesson comprehension; their positive perceptions of FCs remained stable.

The findings also confirmed the argument that students of various academic abilities reacted differently to the flipped approach (P. Lee et al., 2019; Nouri, 2016; Sergis et al., 2018). The quantitative data indicated that FC fostered better learning motivation and engagement of the low performing students than of high performers. The adoption of FC allowed for ample opportunities for lesson preparation, scaffolded learning and immediate feedback from teacher and peers, which benefited low performers in their learning.

7.1.2 Achievements in the FC

With all-flipped intervention in Class A and flipped-and-traditional intervention in Class B, it was possible to observe the achievement over the first flipped phase and then the subsequent effect of remaining with that mode in Class A as well as any contrast with Class B returning to traditional mode. With regard to the second research question about student achievements, the results suggested that Class A experienced a significantly larger improvement in writing performance than Class B.

Based on the total scores and the scores on the four subcategories of *task addressing*; *coherence and cohesion*; *lexical resource*; and *grammatical range and accuracy* across four writing tests, the most substantial progress was noted in the first phase of the flipped model and in the subskill of *task addressing*. The significant differences could be attributed to the FC intervention, which provided an opportunity for rich language exposure and feedback opportunities. *Grammatical range and accuracy* sustained the least progress, which could have resulted from the absence of an explicit focus on this area during class time rather than the use of FC.

As the degree of preparation determined the success of in-class participation, those who completed online activities tended to achieve better grades. While Class A writing progress slowed in the second phase of FC application, which could be a result of students' lower commitment to pre-class study, such a decline was not found to be statistically significant. Class B students achieved better progress in *coherence and cohesion* and *lexical resource* during the FC phase than during the traditional phase. Text analyses of student essays using Text Inspector also revealed significant progress in students' use of academic words in both classes under FC intervention.

The descriptive statistics showed that the low performers gained the greatest from the FC intervention. While the low-level group of Class A maintained their writing progress throughout the two phases of FC, in the case of the flipped-and-traditional model in Class B, the upswing of the low-level group weakened considerably in Phase 2 using the traditional approach. With more scaffolding activities and recursive practices of writing in an FC, low performers could produce genre-specific texts with more appropriate content and organisation, thus being able to bridge the achievement gap over time.

7.1.3 Teaching in the FC

In terms of teachers' perceptions, this study demonstrated that teachers' pedagogical beliefs resulted in differing perceptions of flipped classrooms. Co Huong, who believed in the highly communicative and collaborative nature of her teaching style, tended to be more reluctant in FC implementation since it was time and effort consuming. Thay Tuan, despite his older age and less experience in technological use, believed in the value and relevance of using instructional technologies, thus willing to adopt FC in future instruction. Although both the teachers acknowledged the advantage of pre-class materials for students' deeper understanding of the lesson, they doubted if students could take responsibility for their own learning and were uncertain as to whether the FC environment would increase student achievement. The teachers shared the view that students need to be monitored closely at first stage until they become more habituated to the demands of the FC. Such attitudes bring up questions of teachers trusting their students and giving them responsibility for their own learning.

Teachers' knowledge of technology, pedagogy and content shaped how they incorporated flipped instruction, and they explained that they would feel more comfortable if provided with technical assistance. The teachers reported struggling with limited time and energy even before the application of the FC model; they were mostly concerned about extra workload. As flipped classrooms demand significant start-up effort on the part of teachers, it is challenging for teachers to adopt flipped classrooms without supportive policies that can alleviate their workload. While all teaching innovations take time for teachers to learn the skills, understand the reasons and then implement, the integration of technology in an FC should connect with pedagogical practices and enhance both learning productivity and efficiency.

7.2 Implications for Vietnamese Practitioners

The study took place in the context of Vietnamese higher education reform in response to the increasing social demand for a high-quality workforce. The higher education reform aims to strengthen the link between students' learning experiences and their future work as well as equip them with active and collaborative learning skills (Vietnamese Government, 2005). The employment of ICT and the development of students' English language ability are regarded as important means for better integration into a globalised and multicultural environment (Vietnamese Government, 2008). The potential for flipped classrooms to extend learning beyond the physical classroom and contribute to more effective learning will benefit Vietnamese education reform with the view to achieving the goals of the National Foreign Language Project (NFLP). The findings of this study indicated that flipped learning could be instrumental in overcoming some of the challenges that face higher education institutions such as students' exposure to language and practice, learning autonomy, and time constraints. There are implications for individual teachers and language programs.

As Vietnamese students are often not provided with sufficient class time for language practice, the findings of this study suggested that the application of the FC along with the process-genre framework allows more time online and in class to target specific aspects of students' competencies and to place more value on language input, classroom interactions, and feedback to facilitate their language development. FC, therefore, is a more effective and efficient language teaching procedure to address multiple genres needed in students' various academic and workplace, thus not only improve their writing performance but also empower them for social success.

Translating positive research findings into effective classroom practices still presents challenges for teachers. First-time implementations of new teaching methods are prone to teething problems due to teacher and student inexperience. Teachers need time to adjust their teaching practices and to design learning activities online and in class to better meet students' needs. A period of adjustment is also necessary for students to become more comfortable with this approach and consequently contribute more actively to their own learning. Particularly, Vietnamese first-year students are often not habituated to being self-directed, and may initially struggle to adapt to the flipped learning model. This can be compounded by English being the language of instruction; students of low proficiency will need more guidance in online material and tasks.

In a flipped classroom, technology can support and, in some cases, impede pedagogy. Not all students have technological skills for educational purposes, so the period of adaptation also serves to reconcile their technological competence. Not all students have the same digital devices, so it is necessary to tailor the learning content to their availability. In this study, the use of smartphones negatively impacted some students' participation; the learning content should be adapted to the small screen size for mobile phone users. Vietnamese students also face problems with Internet connection (L. P. Dinh & Nguyen, 2020); they should be provided with alternatives such as hard disks for access to learning content. In all cases, just-in-time and continuing support is needed to maintain students' learning progress.

Comments by students about the quality of materials indicated the need for a certain threshold of technical delivery, including good quality of instructional videos. Vietnamese young people are exposed to high-quality videos and interactive online games; this puts pressure on teachers to "compete" with professional products. The students recommended that the videos should be made more interesting and engaging by the employment of animation effects. To facilitate effective interaction between students and learning content, lecture videos can directly incorporate various types of questions (e.g., a prompt for a recorded response or an adequately challenging question to promote higher-order thinking) (Grimsley, 2015; Hill & Nelson, 2011). As the demand on teachers' time and energy in their existing teaching practice is already great, teachers can take advantage of ready-prepared or professional videos from online platforms such as Youtube, TED, Khan Academy and Coursera. Using subtitles and handouts can assist low-proficiency learners in understanding the lesson and reduce their

cognitive load.

As students indicated that they needed and appreciated guidance in their online learning, it is important to create an online learning community with teachers' involvement and feedback to give students the opportunity to engage more and not feel isolated while learning online. It may take considerable drive, self-discipline, and self-directed learning skills for students to study before class (He et al., 2016); rewards in the form of digital badges and points will encourage students to be more involved in online learning experience. The study results imply that it is important for instructors in flipped classrooms to prepare students with online self-regulated learning skills such as goal setting, time management, and help-seeking for pre-class sessions. To Vietnamese students, who are often considered reticent to ask questions even online, the use of applications for anonymous questions should be taken into consideration.

Despite fears that the roles of teachers in the classroom will be diminished when all the learning materials are readily available to students (Masland & Gizdarska., 2018; Wilson, 2013), the study affirmed that teachers play a pivotal role in the flipped model. In Vietnam, teachers have been perceived to be the authority in terms of knowledge and power (Bui, 2018); they need to take an active role in bringing in effective instructional approaches and tools. They need to understand how to use technology to teach concepts in a way that enhances student learning experiences (TPACK). In order to avoid reproducing the traditional classroom with technology, teachers need extra training in the design and implementation of flipped pedagogy (M. K. Kim et al., 2014). Nielsen (2012) noted that while flipped teaching promotes exposure to instruction and application of skills, if teachers are not prepared for the level of planning and structure required, the flipped teaching model only increases the possibilities for poor pedagogy. As technology-based education is unquestionably going to grow, a strong pedagogical foundation will ensure meaningful and effective use of technologies.

Collaboration has been stressed as a highly regarded skill in Vietnamese workforce; this study underlined the need for collaboration among teachers to initiate the flipped classroom instruction in a more efficient way. Colleagues can work together to prepare the learning resources and evaluate the effectiveness of the flipped classroom. As coherent systemic support is essential for any educational innovations, school administrators or policymakers acknowledging the efficacy of the FC model will determine practical and useful future steps in offering support or training to teachers and students, together with an upgrade of necessary infrastructure.

7.3 Contributions of the Research

Investigating the effects of flipped classrooms in a Vietnamese context contributes to the body of knowledge of language teaching, providing new insights that other populations may face. While previous studies have indicated that a well-designed flipped model of instruction helps improve students'

writing performance (P. Lee et al., 2019; W.-C. V. Wu et al., 2020; Zou & Xie, 2019), this study enabled a more thorough examination of student progress in writing subskills. This study provided theoretical and empirical support for flipped learning in Vietnam by demonstrating that the FC approach worked effectively in a Confucian heritage culture like Vietnam with students routinely assumed by teachers to be non-autonomous and teacher-dependent. It also contributed a better understanding of whether and how FC effectiveness varies by learner level among diverse findings about the effect of FCs on academic profiles (see He et al., 2016; I. Lee et al., 2019; Setren et al., 2019).

This study has foregrounded social constructivism as a mainstream theoretical base in flipped learning. The supporting environment for interaction and feedback in the FC was found to be positively correlated with learning outcomes. This study has also added evidence to the use of online learning analytics as an opportunity to monitor patterns in the behaviours of individual students for teachers to better understand how their students learn using online materials and to identify and assist at-risk students. In this study, the positive effects of FCs found in students' learning attitudes and achievements reduced but stabilised over time. Teachers need to be aware that initial excitement may be a false reading; they need to be aware of the novelty effect and then be prepared to keep up the quality of the flipped mode.

The majority of published research has focused on positive attributes of the flipped classroom (Akçayır & Akçayır, 2018), but few articles employed a robust scientific method to verify the rates of change in students' learning attitudes and achievements over continued usage. Furthermore, this study demonstrated these changes through investigating the effects of implementing the FC approach and then observing the effects of returning to the traditional approach. Unlike most studies with the traditional classroom as a control group, the design of different interventions such as this study shed more light on teachers' and students' preferences and perceptions by giving them a chance to reflect upon the flipped approach and compare it against traditional lectures within the same semester.

This study is also notable for the close consideration of quantitative data in case studies, one that traditionally uses qualitative methods. While the quantitative paradigm had the statistical power to detect trends/patterns and test hypotheses (R. B. Johnson & Onwuegbuzie, 2004), the qualitative paradigm was descriptive for the interpretation of lived experience that typically do not emerge from quantitative research (Jeanty & Hibel, 2011). Statistical tests were applied for the pre/post-questionnaires and writing pre/post-tests to determine the significance of changes in student attitudes and achievements under two phases of interventions. While ANCOVAs are often used to adjust for pre-existing differences in non-equivalent (intact) groups, in this case of small sample sizes and violation of normal distribution, Rank ANCOVAs were better suited. These quantitative methods enhanced the qualitative data from both teachers and students' responses, providing a comprehensive perspective on the benefits and challenges of FCs.

This study was not without limitations. The selection of target population in one Vietnamese university was subject to convenience sampling. The findings might not be representative of all Vietnamese tertiary students and EFL staff, thus making generalisations beyond this setting quite limited. The students targeted for this study, too, were English majors, so they were quite motivated to improve their English proficiency. However, the findings provide interesting insights for similar contexts. The small sample size of 32 students in this study also limits its generalisability. Future research with a larger sample size and random sampling would contribute a broader range of responses and would be generalisable to the larger population. In extending the scope of further research, other variables such as to students at lower motivation levels and non-English majors could help explore the effectiveness of this approach.

In this study, despite the same materials and activities, the ways that the two instructors implemented flipped learning might have an impact on students' learning. Thus, further research would benefit from using the same set of instructors over an extended period of time. Another aspect might be to use high-stakes exams to assess intervention effect, so the results are more useful for guiding practical decisions.

Finally, students' learning behaviour provides another avenue for future research. Examining patterns of students' LMS usage in the flipped approach might include frequency of log-in, assignment submission time, and access to specific learning materials, which most research has not considered.

7.4 Concluding Remarks

This study arose from the consideration how technology might help students to learn better and teachers to teach better. Enriched with technology, the flipped classroom approach has been gaining recognition for facilitating students' engagement and performance through the provision of learning resources online and the promotion of higher-order thinking activities in class. The findings of this study have provided evidence-based information to understand how students and teachers respond to flipped classrooms. The FC has been found to foster students' learning if it is implemented thoughtfully to avoid some possible pitfalls such as digital divide and students' resistance to change. The results of this study also provide insights into possible ways to raise learning outcomes and reform language education in Vietnam.

Coincidentally, this research into flipped classrooms proved timely, in view of the rapid changes that were made to teaching and learning after the COVID-19 pandemic of 2020 - 2022. When classes were switched to fully online mode in response to the pandemic, the participating teachers and students were suddenly at an advantage as they had been accustomed to online learning environments throughout this study. Amidst the COVID-19 crisis, there seems to be no other alternative but change in lesson delivery and teaching practice to ensure the continuity of education.

It stands to reason that the demand for online learning platforms will continue to grow even after onsite instruction has returned. As much as technology serves us well as the delivery mechanism and affords us enriched mediated interactions, the face-to-face educational experience cannot be lost. A blended learning mode such as flipped classrooms has been found a necessity in maintaining meaningful interaction and effective feedback between teachers and students.

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Appendix A

A.1 Weekly Schedules

Week 4

- Pre-Questionnaire
- Pre-Test 1 (60')

Table A.1.
Descriptive Writing

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 5)**
To get an overview of descriptive writing	Watch the video clip (03:27) (V1) Week 4: Descriptive Writing	Answer the embedded questions	Check Ss' understanding: 1. Any questions about the online session? 2. What is the structure of an academic essay?
To outline a descriptive essay	*Handout 1*: How to Make an Outline	*Practice 1*: Complete the outline of "The Restaurant" (Great Writing 3, pp. 96-97)	*Homework check*: Feedback on Ss' outline of "The Restaurant" *Practice 1*: - In groups, Ss make an outline for the given topic - Ss present their outlines & T gives feedback
To write the introduction	Watch the video clip (02:01) (V2) Introduction Paragraph	Answer the embedded questions	*Practice 2*: - Ss write the introduction individually - Ss check each other's writing (peer editing)
	Handout 2: 15 Ways to Write Your Introduction	*Practice 2*: (A1) Label the types of hook	- Some Ss present their intro & T gives feedback

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 5)**
Vocabulary Practice	Padlet Hints for choosing more formal words `https://unilearning.uow.edu.au/academic/2bi.html`	*Practice 3*: Picture prompts for description *Practice 4*: Sophisticated Word Choice `https://unilearning.uow.edu.au/academic/2bi_q2.html`	*CONSOLIDATION*: Writing Checklist *HOMEWORK*: - Complete Week 5 online activities - Write a complete essay about your chosen topic (250–400 words) - Bring the hard copy to class
Adjective Order Academic Word List	*Khan Academy* `https://www.khanacademy.org/humanities/grammar/parts-of-speech-the-modifier/adjective-order-and-commas-with-adjectives/v/adjective-order`		
Academic Word List	`https://www.examenglish.com/vocabulary/academic_wordlist.html`		

Table A.2.
Descriptive Language

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 6)**
To make specific sentences	Watch the video clip (06:41) (V3) Week 5 – Descriptive Language	Answer the embedded questions	- T shows the best SHOWING examples written by Ss - T gives comments about Ss' words on Padlet in terms of **sensory details** *Practice 1:* - T shows a video clip about Thailand Tourism - Ss take notes of the descriptive words used in the clip - In groups, Ss create an **advertisement** (that lasts 2

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 6)**
			minutes) for the best summer destination (using the words that appeal to the 5 senses they have prepared) - Each group presents their ad - Ss vote for the best ad - T gives feedback
To use transitions in a descriptive essay	*Handout 1*: Transitions	*Practice 1*: (A2) Drag & drop the appropriate transitions into the text	
To write a complete descriptive essay		*Assignment*: Write a complete essay about your chosen topic (250–400 words) & bring	*Peer editing:* - Ss exchange their essays - Ss give feedback by filling the **Peer Editing Sheet 8**
		the hard copy to class *Topic 1:* Describe an ideal place to study *Topic 2:* Describe a place in your childhood memory *Topic 3:* Describe a place that only exists in your imagination	- T gives feedback *HOMEWORK* - Complete Week 6 online activities - Submit the revised essay online

Vocabulary Practice	- Prepositions of Location
	- Collocations
		Practice 2:
		`https://languageavenue.com/component/com_joomlaquiz/Itemid,101/force,1/quiz_id,38/view,quiz/`
		Practice 3:
		`http://www.ieltstutors.org/ieltstutors-tips-blog/ielts-vocabulary-collocations-quiz-6`	

Academic Word List (Optional)	`https://emedia.rmit.edu.au/learninglab/content/test-yourself`		

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 6)**
Grammar for Writing (Optional)	`http://www.bristol.ac.uk/arts/exercises/grammar/grammar_tutorial/page_41.htm`		

Table A.3.
Comparison Essays

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 7)**
Make the outline	Watch the video clip (07:53) (V4) Week 6 – Comparison Essays *Handout :* Thesis Sentence Templates	Answer the embedded questions *Practice 1:* (A3) Choosing Appropriate Topics & Titles	T shows some examples & asks Ss 1. Are they strong or weak thesis statements? 2. Explain your answers T asks Ss about the methods of organization
Brainstorm ideas		*Practice 2:* - Brainstorming ideas - For each topic, fill in the tables with different and shared features of the two items *Topic 1:* Shopping at stores vs. Shopping online *Topic 2:* Desktops vs. Laptops	*Practice 1:* - Activity 2 (Great Writing 3, p. 119) - T asks Ss to give quick answers *Practice 2:* - Activity 3 (Great Writing 3, p. 121) - Ss do the activity IN PAIRS - T gives feedback
		Topic 2: Desktops vs. Laptops *Topic 3:* Concept of beauty: Asian vs. Western *Topic 4:* Two stressful jobs	*Practice 3: IN GROUPS* Write Introduction & Conclusion of ONE topic • *Topic 1*: Shopping at stores vs. Shopping online • *Topic 2*: Desktops vs. Laptops • *Topic 3*: Concept of beauty: Asian vs. Western • *Topic 4*: Two stressful jobs - Ss exchange their writing for peer feedback - T gives feedback

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 7)**
Grammar Practice	Comparative & Superlative Forms `https://www.khanacademy.org/humanities/grammar/parts-of-speech-the-modifier/comparative-superlative-intensifiers-and-adverbs-of-degree/e/comparative-and-superlative-adjectives-and-adverbs`		*Homework* 1. Each group works on the outline to present in class next week 2. Do Week 7 online activities
		Assignment: Revised the Descriptive Essay	

Table A.4.
Useful Language for Comparison Essays

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 8)**
To write a complete Comparison essay	Watch the video clip (01:48) (V5) Outlines – UNC Writing Center	*Assignment:* GROUP WORK Make a detailed OUTLINE for next week's presentation *Topic 1:* Shopping at stores vs. Shopping online *Topic 2*: Desktops vs. Laptops *Topic 3:* Concept of beauty: Asian vs. Western *Topic 4:* Two stressful jobs	*Practice 1:* Activity 8 / p.128 *Practice 2:* Ss work in GROUPS to make 8 comparison sentences about the 3 laptops and decide the best purchase (**Worksheet**) Group presentations: • Topic 1: Shopping at stores vs. Shopping online • Topic 2: Desktops vs. Laptops • Topic 3: Concept of beauty: Asian vs. Western • Topic 4: Two stressful jobs - Ss discuss in GROUPS to fill in the Peer Editing Sheet - T gives feedback

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 8)**
			Practice 3: INDIVIDUAL WRITING - Ss write ONE body paragraph about their chosen topic - Ss exchange their writing for peer feedback - T gives feedback
Vocabulary practice	*Handout:* Comparison-Contrast Signal Words	*Practice 1:* (A4) Comparison-Contrast Signal Words *Practice 2:* (A5) Connectors	
Grammar Practice		*Practice 3:* Parallel Structure `https://www.khanacademy.org/humanities/grammar/syntax-conventions-of-standard-english/dangling-modifiers-and-parallel-structure/e/parallel-structure`	
Optional	Sample Comparison Essays		

Table A.5.
Revision

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 9)**
Revision	- Sample Descriptive Essays - Sample Comparison Essays - 10 Common Mistakes in Writing		Revision - T asks Ss to do Activity 11/p.131 & Activity 12/p.132 - T gives feedback
	`https://latrobe.libguides.com/language/common-mistakes`		- T shows some common mistakes in writing POST-QUESTIONNAIRE 1 POST-TEST 1

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 9)**
Vocabulary Practice	Noun & Verb Collocations `http://www.esl-lounge.com/student/vocabulary-advanced-2.php` Comparison & Contrast Vocabulary `https://www.tolearnenglish.com/exercises/exercise-english-2/exercise-english-23362.php` Academic Word List `https://ielts-up.com/writing/ielts-academic-wordlist.html`		
Grammar Practice	Grammar Quizzes `http://depts.dyc.edu/learningcenter/owl/grammar_topics.htm`		

Table A.6.
Cause-Effect Essays

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 10)**
Make the outline	Watch the video clip (05:18) (V6) Week 9 – Cause-Effect Essays	Answer the embedded questions	Warm-up - T divides class into 2 groups. - 1 student from each group will guess the topic (shown on slide) based on the others' explanation. - Each group gains 1 point for each correct & faster answer and 1 point for ideas related to the topic. - T revises the structures of

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 10)**
			Cause-Effect Essays. *Practice:* - T ask Ss to do Activity 2/p.143 & Activity 3/p.145
Brainstorm Ideas	Padlet	Brainstorm ideas for the given topics *Topic 1*: Why do some people avoid getting involved in politics? *Topic 2*: What are the causes of sexual harassment? *Topic 3*: What are the benefits of using eco-friendly products?	*HOMEWORK* 1. Complete **Week 10** online activities 2. Brainstorm ideas for the given topics (Week 9 Padlet) • *Topic 1*: Why do some people avoid getting involved in politics? • *Topic 2*: What are the causes of sexual harassment?
		Topic 4: What impacts do social media have on individuals and society?	• *Topic 3*: What are the benefits of using eco-friendly products? • *Topic 4*: What impacts do social media have on individuals and society?
Grammar Practice	Tenses in Academic Writing `https://www.adelaide.edu.au/english-for-uni/tenses/`		PRE-TEST 2
Optional	Cause & Effect - Model Essays Forms for Showing Cause & Effect `https://www.thoughtco.com/writing-cause-and-effect-essays-1212402`		

Table A.7.
Useful Language for Cause-Effect Essays

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 11)**
Write a complete Cause	Watch the video clip (09:13) (V7) How to	Answer the embedded questions	Warm-up Kahoot Quiz (16 questions)

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 11)**
& Effect essay	Express Cause & Effect Relationship	*Practice 1:* Choose ONE topic to make the OUTLINE	Ss with connected smart phones join the activity
	Handout: Cause-Effect Signal Words & Phrases	(based on the Padlet posts) *Topic 1*: Why do some people avoid getting involved in politics? *Topic 2*: What are the causes of sexual harassment? *Topic 3*: What are the benefits of using eco-friendly products? *Topic 4*: What impacts do social media have on individuals and society?	Activity 7/p. 151 & Activity 10/p. 155 *Practice 1* - T asks Ss about effects of computers on higher education - T gives Ss the worksheet & assigns the paragraphs (1), (2) or (3) for Ss' writing supporting sentences (IN PAIRS) - T gives feedback *Practice 2* - Ss revise each other's outlines - T gives feedback
Vocabulary Practice		*Practice 2*: (A6) Connectors	

Further Practice	Advanced Vocabulary of Cause & Effect
	`https://www.engvid.com/advanced-vocabulary-cause-effect/`
	Cause & Effect Expressions
	`https://www.grammar-quizzes.com/19-2.html`
	Discussion of a Cause-Effect Essay
			HOMEWORK
			1. Complete Week 11 online activities
			2. Write a complete essay & submit online for peer feedback
			Topic 1:
			Why do some people avoid getting involved in politics?
			Topic 2:
			What are the causes of sexual harassment?

	`https://www.coursera.org/lecture/getting-started-with-essay-writing/teacher-discusses-a-cause-effect-essay-jj1s0`		*Topic 3*: What are the benefits of using eco-friendly products? *Topic 4*: What impacts do social media have on individuals and society?

Table A.8.
Classification Essays

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 12)**
Make the outline	Watch the video clip (03:55) (V8) Classification Essay or Paragraph *Handout* Classification Essays	Answer the embedded questions	Warm-up Game: Who wants to be a millionaire? For each question, T asks Ss to explain their answer (Refer to the Notes). - T leads to the new lesson of Classification Essays - T asks Ss to list types of selfie - T asks Ss to point out the classification principles - Activity 2/p. 169 - Activity 3/p. 171 *Practice*: Outlining a classification essay - T divides Ss into 4 groups to work on 4 topics
			1. Cinema goers 2. Compliments 3. Search engines 4. Financial risks Peer feedback & T's feedback

Grammar Practice	*Practice 1:*
	Passive Voice Games
	`https://www.mes-games.com/passive1.php`
	Practice 2:
	Adjective Clause Quiz
	`https://www.grammar-quizzes.com/adjclausequiz.html`
			HOMEWORK
			- Complete Week 12 online activities
			- Edit your peers' Cause & Effect essays using Track Changes & Comment

	Sample Classification Essays		

Week 12

Home Assignment: Write a complete essay of your chosen topic

- **Topic 1**: Why do some people avoid getting involved in politics?

- **Topic 2**: What are the causes of sexual harassment?
- **Topic 3**: What are the benefits of using eco-friendly products?
- **Topic 4**: What impacts do social media have on individuals and society?

Table A.9.
Revision

Learning Objectives	**ONLINE Resources**	**ONLINE Activities & Assignmentse**	**IN-CLASS Activities (WEEK 6)**
Write a complete Classification essay	*Handout 1:* Patterns of Organization *Handout 2:* Language for Classification	*Practice 1:* (A7) Drag & drop the appropriate connectors into the text *Practice 2:* (A8) Collocations	*POST-QUESTIONNAIRE 2* *POST-TEST 2*
Optional	Spelling Exercises & Games `https://howtospell.co.uk/spellingquiz.php`		
Peer editing		Please review at least ONE essay per topic in 2 ways: • For Grammar and Spelling mistakes: Make direct changes to the text • For others (Vocabulary, Organization, Ideas, etc.): Add comments by highlighting the text & clicking [+] that appears on the right. To view the changes: See version history `https://zapier.com/blog/google-docs-revision-history/`	

A.2 Writing Rubric

Table A.10.
Writing Rubric (Adapted from IELTS Task 2 Writing Band Descriptors)

Scores	Task Addressing	Coherence & Cohesion	Lexical Resource	Grammatical Range & Accuracy
9-10	• fully addresses all parts of the task • presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	• uses cohesion in such a way that it attracts no attention • skilfully manages paragraphing	• uses a wide range of vocabulary with very natural and sophisticated control of lexical features; rare minor errors occur only as 'slips'	• uses a wide range of structures with full flexibility and accuracy; rare minor errors occur only as 'slips'
8-9	• sufficiently addresses all parts of the task -presents a well-developed response to the question with relevant, extended and supported ideas	• sequences information and ideas logically • manages all aspects of cohesion well • uses paragraphing sufficiently and appropriately	• uses a wide range of vocabulary fluently and flexibly to convey precise meanings • skilfully uses uncommon lexical items but there may be occasional inaccuracies in word choice and collocation • produces rare errors in spelling and/or word formation	• uses a wide range of structures • the majority of sentences are error-free • makes only very occasional errors or inappropriacies

Scores	Task Addressing	Coherence & Cohesion	Lexical Resource	Grammatical Range & Accuracy
7-8	• addresses all parts of the task • presents a clear position throughout the response • presents, extends and supports main ideas, but there may be a tendency to overgeneralise and/or supporting ideas may lack focus	• logically organizes information and ideas; there is clear progression throughout • uses a range of cohesive devices appropriately although there may be some under-/over-use • presents a clear central topic within each paragraph	• uses a sufficient range of vocabulary to allow some flexibility and precision • uses less common lexical items with some awareness of style and collocation • may produce occasional errors in word choice, spelling and/or word formation	• uses a variety of complex structures • produces frequent error-free sentences • has good control of grammar and punctuation but may make a few errors
6-7	• addresses all parts of the task although some parts may be more fully covered than others • presents a relevant position although the conclusions may become unclear or repetitive • presents relevant main ideas but some may be inadequately developed/unclear	• arranges information and ideas coherently and there is a clear overall progression • uses cohesive devices effectively, but cohesion within and/or between sentences may be faulty or mechanical • may not always use referencing clearly or appropriately • uses paragraphing, but not always logically	• uses an adequate range of vocabulary for the task • attempts to use less common vocabulary but with some inaccuracy • makes some errors in spelling and/or word formation, but they do not impede communication	• uses a mix of simple and complex sentence forms • makes some errors in grammar and punctuation but they rarely reduce communication

Scores	Task Addressing	Coherence & Cohesion	Lexical Resource	Grammatical Range & Accuracy
5-6	• addresses the task only partially; the format may be inappropriate in places • expresses a position but the development is not always clear and there may be no conclusions drawn • presents some main ideas but these are limited and not sufficiently developed; there may be irrelevant detail	• presents information with some organisation but there may be a lack of overall progression • makes inadequate, inaccurate or overuse of cohesive devices • may be repetitive because of lack of referencing and substitution • may not write in paragraphs, or paragraphing may be inadequate	• uses a limited range of vocabulary, but this is minimally adequate for the task • may make noticeable errors in spelling and/or word formation that may cause some difficulty for the reader	• uses only a limited range of structures • attempts complex sentences but these tend to be less accurate than simple sentences • may make frequent grammatical errors and punctuation may be faulty; errors can cause some difficulty for the reader
4-5	• responds to the task only in a minimal way or the answer is tangential; the format may be inappropriate • presents a position but this is unclear • presents some main ideas but these are difficult to identify and may be repetitive, irrelevant or not well supported	• presents information and ideas but these are not arranged coherently and there is no clear progression in the response • uses some basic cohesive devices but these may be inaccurate or repetitive • may not write in paragraphs or their use may be confusing	• uses only basic vocabulary which may be used repetitively or which may be inappropriate for the task • has limited control of word formation and/or spelling; errors may cause strain for the reader	• uses only a very limited range of structures with only rare use of subordinate clauses • some structures are accurate but errors predominate, and punctuation is often faulty

Scores	Task Addressing	Coherence & Cohesion	Lexical Resource	Grammatical Range & Accuracy
3-4	• does not adequately address any part of the task • does not express a clear position • presents few ideas, which are largely undeveloped or irrelevant	• does not organise ideas logically • may use a very limited range of cohesive devices, and those used may not indicate a logical relationship between ideas	• uses only a very limited range of words and expressions with very limited control of word formation and/or spelling • errors may severely distort the message	• attempts sentence forms but errors in grammar and punctuation predominate and distort the meaning
2-3	• barely responds to the task • does not express a position • may attempt to present one or two ideas but there is no development	• has very little control of organisational features	• uses an extremely limited range of vocabulary; essentially no control of word formation and/or spelling	• cannot use sentence forms except in memorised phrases
1-2	• answer is completely unrelated to the task	• fails to communicate any message	• can only use a few isolated words	• cannot use sentence forms at all
0-1	• does not attend • does not attempt the task in any way • writes a totally memorised response			

A.3 Questionnaires

Table A.11.
Questionnaire

STUDENT PRE-QUESTIONNAIRE: (Week 4)

1. BACKGROUND INFORMATION

(1) Age: ☐ 18-21 ☐ 22-25 ☐ 26-30 ☐ Over 30

(2) Gender: ☐ Male ☐ Female ☐ Other

(3) Study major: ..... Year: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ Other

(4) Experience of online course(s): ☐ Yes ☐ No

(5) Digital devices you have access to:

☐ None ☐ Desktop ☐ Laptop ☐ Smart phone ☐ Tablet

(6) For what purpose(s): *Please order the activities according to the amount of time you spend on a daily basis (from the most to the least time-consuming activity)*

☐ Entertainment (games, movies, music, etc.)

☐ Communication (call, message, email, etc.)

☐ Social networking (Facebook, Twitter, Instagram, etc.)

☐ Information (Google, electronic databases, etc.)

☐ Study (projects, presentations, homework, etc.)

☐ Other - Please specify: .....

2. ATTITUDES TOWARDS ENGLISH ACADEMIC WRITING (EAW)

(Adapted from Payne, 2012 and Subramaniam & Muniandy, 2017)

Please indicate your opinion on each statement by ticking the boxes below which best indicate the extent to which you agree or disagree with that statement
(1 = I strongly disagree; 2 = I disagree; 3 = undecided; 4 = I agree; 5 = I strongly agree)

	Motivation in English Academic Writing (EAW)	**1**	**2**	**3**	**4**	**5**
1	I enjoy writing academic essays.					
2	I believe writing could be of some value to me.					
3	I like to write even if my writing will not be graded.					

Table A.12.
Questionnaire

4	I think I do pretty well in writing, compared to my classmates.					
Engagement in EAW						
5	I always finish my writing homework before class.					
6	During writing class, I ask questions to help me learn.					
7	I feel excited about the things I learn in writing class.					
8	I often look for ways to improve my writing.					
Perceived Effectiveness in EAW						
9	My writing has improved with time.					
10	I am able to clearly express my ideas in writing.					
11	I know how to use VOCABULARY appropriately in my writing.					
12	I know how to use COLLOCATIONS appropriately in my writing.					
13	I know how to make an appropriate essay organisation.					
14	Before-class tasks help me prepare for the lessons better.					
15	Peers' editing helps me improve my writing.					
16	A teacher's feedback helps me improve my writing.					

Table A.13.
Questionnaire

STUDENT POST-QUESTIONNAIRE: (Weeks 9 &14)

1. STUDENT HOME STUDY

(1) How many hours do you spend studying **BEFORE** each week's class?

☐ Less than 1 hour ☐ 1-2 hours ☐ 2-3 hours ☐ More than 3 hours

(2) Do you have any difficulties doing your homework? If yes, what are they?

.....

(3) How many times do you often watch each video clip?

☐ Not at all ☐ 1 ☐ 2 ☐ 3 ☐ More than 3

(4) How well do you feel you understood its content?

☐ Not at all ☐ A little ☐ Quite well ☐ Well ☐ Very well

Please explain your answer. .....

(5) You would prefer to watch video clips by ..... *(more than 1 choice is possible).*

☐ Native English teachers ☐ Non-native English teachers ☐ Your teacher in charge

2. ATTITUDES TOWARDS ENGLISH ACADEMIC WRITING (EAW)

(Adapted from Payne, 2012 and Subramaniam & Muniandy, 2017)

Please indicate your opinion on each statement by ticking the boxes below which best indicate the extent to which you agree or disagree with that statement
(1 – I strongly disagree; 2 – I disagree; 3 – undecided; 4 – I agree; 5 – I strongly agree)

	Motivation in English Academic Writing (EAW)	**1**	**2**	**3**	**4**	**5**
1	I enjoy writing academic essays.					
2	I believe writing could be of some value to me.					
3	I like to write even if my writing will not be graded.					
4	I think I do pretty well in writing, compared to my classmates.					
	Engagement in EAW					

Table A.14.
Questionnaire

5	I always finish my writing homework before class.					
6	During writing class, I ask questions to help me learn.					
7	I feel excited about the things I learn in writing class.					
8	I often look for ways to improve my writing.					
Perceived Effectiveness in EAW						
9	My writing has improved with time.					
10	I am able to clearly express my ideas in writing.					
11	I know how to use VOCABULARY appropriately in my writing.					
12	I know how to use COLLOCATIONS appropriately in my writing.					
13	I know how to make an appropriate essay organisation.					
14	Before-class tasks help me prepare for the lessons better.					
15	Peers' editing helps me improve my writing.					
16	A teacher's feedback helps me improve my writing.					

3. STUDENT PERCEPTIONS OF LEARNING EXPERIENCES

(Adapted from Ahmed, 2016 and Hsieh et al , 2017)

Please indicate your opinion on each statement by ticking the boxes below which best indicates the extent to which you agree or disagree with that statement.

(1 = I strongly disagree; 2 = I disagree; 3 = undecided; 4 = I agree; 5 = I strongly agree)

Student perceptions of learning experiences		**1**	**2**	**3**	**4**	**5**
1	Classroom time is used more effectively in the flipped classroom than the lecture-based (traditional) classroom.					

Table A.15.
Questionnaire

2	I feel I am more in charge of my learning in a **TRADITIONAL** classroom.					
3	I participate more in the flipped classroom activities than in traditional classrooms.					
4	I **DO NOT** enjoy flipped classrooms.					
5	I think the online videos/materials guide me toward better understanding of the course topics.					
6	I prefer **TRADITIONAL** lectures in class to video lessons at home.					
7	I feel the flipped instruction **DOES NOT** help my learning.					
8	The flipped classroom facilitates more communication between me and my teacher.					
9	The flipped classroom facilitates more communication between me and my classmates.					
10	Generally, I am happy and satisfied with the flipped learning experience.					

3. OPEN-ENDED QUESTIONS: (Adapted from Adnan, 2017)

(1) What do you think are the **MOST** satisfying aspect(s) of this learning experience?

(2) What do you think are the **LEAST** satisfying aspect(s) of this learning experience?

(3) How many hours per week do you spend on your home self-study for this course (online + other activities)? For what activities (before and after each class)?

(4) What improvements would you suggest to improve ONLINE sessions for this course?

(5) What improvements would you suggest to improve IN-CLASS sessions for this course?

A.4 The Teaching Dimensions Observation Protocol

The Teaching Dimensions Observation Protocol (TDOP) (Hora & Ferrare, 2010)

Table A.16.
Observer refers to code key for completing grid

Min	**0-9:59**	**10-19:59**	**20-29:59**	**30-39:59**	**40-49:59**
Teaching Methods					
Notes					
Pedagogical Moves					
Notes					
T-S Interactions					
Notes					
Cognitive Engagement					
Notes					
Instructional Technology					
Notes					

Observation Code Bank (Hora & Ferrare, 2010, p. 2-3)

Teaching Methods

L Lecture: The instructor is talking to the students and not using any visuals or demonstration equipment.

LPV Lecture with pre-made visuals: The instructor is talking to the students while using pre-made visual aides, such as slides, transparencies, posters, pre-written chalkboard notes, etc. The instructor must be referring to topic contained in the visual.

LHV Lecture with handwritten visuals: The instructor is talking to the students while actively writing and presenting notes, creating charts/diagrams (must either be writing or referring to what they are writing).

LDEM Lecturing with demonstration of topic or phenomena: The instructor uses equipment (e.g., lab equipment, computer simulation, or other physical objects) to convey course content. The objects must be in active use in relation to topic.

LINT Interactive lecture: The instructor is talking to the students while asking multiple, successive questions to which the students are responding, and student responses are either guiding or being integrated within the discussion.

SGW Small group work/discussion: Students form into groups of 2+ for the purposes of discussion and/or to complete task.

DW Deskwork: Students complete work alone at their desk/chair.

CD Whole class discussion: Students are answering and asking questions amongst themselves for a sustained period of time. This is different than an interactive lecture in which the instructor is directing all of the questions.

MM Multimedia: The instructor plays a video or movie (e.g., youtube or documentary) without speaking and while the students watch. SP Student presentation: The students are giving presentations to the class or otherwise acting as the primary speaker or instructor in the classroom. In this instance, only select this code and none others as long as the primary instructor is not actively teaching the class.

Pedagogical Moves

MOV Moves into audience: The instructor walks up aisles or enters the student seating area of classroom.

HUM Humor: The instructor tells jokes or humorous anecdotes; this code requires laughter from students.

RDS Reads: The instructor reads verbatim from prepared notes, text or PowerPoint slides; must be extensive reading and not just reading slide headings or definitions and then elaborating extemporaneously.

IL Illustration: The instructor uses real-world examples or illustrations to demonstrate, show, or otherwise convey course content. Anecdotes and stories that are not substantive demonstrations or illustrations of the course material should not be coded.

ORG Organization: The instructor writes or posts outline of class or clearly (and verbally) indicates transition from one topic to the next, including transitions from previous class to the present class.

EMP Emphasis: The instructor clearly states that something is important for students to learn or remember.

A Assessment: The students take a test or quiz, or are asked a question verbally or through the use of clickers that explicitly seeks content-related knowledge from the students.

AT Administrative task: The instructor and/or students make announcements, discuss upcoming assignments or exams, or engaging in other logistical tasks.

Instructor/Student Interactions (Types of Q&A)

RQ Instructor rhetorical question: The instructor asks a question without seeking an answer and without giving students an opportunity to answer the question.

DQ Instructor display question: The instructor seeks a specific factual or conceptual answer, or asks students to solve a computational problem or a conceptual dilemma.

CQ Instructor comprehension question: The instructor checks for understanding (e.g., "Does that make sense?") and pauses for at least two seconds, thereby indicating an opportunity for students to respond.

SNQ Student novel question: A student poses a question to the instructor that seeks new information (i.e. not asking to clarify a concept that was previously being discussed).

SCQ Student comprehension question: A student poses a question to the instructor that seeks clarification of a concept that is part of the current or past class period.

SR Student response: A student responds to a question posed by the instructor.

Cognitive Engagement (of students)

ART Articulating: Students are verbally articulating thoughts, ideas, solutions or opinions on a topic. More than 1 person must be answering a question and/or engaging in dialogue.

RMF Reciting and/or memorizing facts: Students are provided verbal or handwritten definitions of terms or equations, or are asked to define a term or recall basic facts through a verbal question or clicker question.

PS Problem solving: Students are asked to apply understand and solve an analytic process. This includes computations or evaluation of conceptual dilemmas, and is evident through explicit verbal requests to solve a problem, or to engage in thought experiments or conceptual dilemmas that require students to consider alternatives and identify solutions.

CR Creating: Students engage in creating their own ideas or products, as indicated by instructors providing opportunities for students to be creative and/or generate their own ideas and products. The outcome is open-ended rather than fixed.

CN Connections to the real world: Students make connections between the course material and their daily lives, as indicated by instructors using illustrations that link material to popular culture, the local environment, etc.

Instructional Technology

PO Poster: Posters such as the periodic table or a map of tectonic plates.

B Book(s): Books used during the class period.

N Notes: Lecture notes actively used by instructor during the class.

P Pointer (e.g., laser pointer, metal pointer)

CB Chalk-board/white-board

OP Overhead/transparencies

PP Powerpoint or other digital slides

CL Clickers

D Demonstration equipment

DT Digital tablet: This refers to any technology where the instructor can actively write on a document or graphic that is being projected onto a screen. This includes document cameras as well as software on a laptop that allows for writing on pdf files.

M Movie, documentary, video clips, or Youtube video

SI Simulation: Simulations can be digital applets or web-based applications.

WEB Website: Includes reference to course website or other online resource (besides Youtube videos) as active part of instruction.

OB Object: Random object used as part of instruction (e.g., chair).

A.5 Semi-Structured Interviews

Semi-structured interviews (Adapted from Hsieh et al. (2017))

(**1**) With STUDENTS in focus group interviews (Week 14):

- Did you have any experience of / ideas about flipped classroom prior to taking this class? If yes, could you tell me about it?
- Describe your own learning experiences in the writing sessions in terms of (**1**) time and effort you spent, (**2**) learning outcomes (effectiveness), (**3**) teaching method and (**4**) activities (online and in-class).
- Did you observe any changes in your attitude towards flipped instruction? What changes and why?
- With the flipped classroom model, what are the benefits and drawbacks for you as a student?
- In what areas do you think this instructional design could be improved: learning materials, teaching method and activities (online and in-class)?

(**2**) With TEACHERS (Weeks 9 & 14):

- Did you have any experience of / ideas about flipped classroom prior to participating in this research? If yes, could you tell me about it?
- Describe your own teaching experiences in the writing sessions in terms of (**1**) time and effort you spent, (**2**) learning outcomes (effectiveness) for students, (**3**) teaching method and (**4**) activities (online and in-class).
- Did you observe any changes in your attitude towards flipped instruction? What changes and why?
- With the flipped classroom model, what are the benefits and drawbacks for you as a teacher?
- In what areas do you think this instructional design could be improved: learning materials, teaching method and activities (online and in-class)?

A.6 Consent Form

Table A.17.
Information Sheet & Consent Form

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

TEACHER INFORMATION SHEET
The Impacts of Flipped Classroom Approaches on EFL Students' Attitudes, Performance and Use of Formulaic Sequences in Academic Writing in a Vietnamese Higher Education Context
UTS HREC ETH18-2960

WHO IS DOING THE RESEARCH?
My name is Do Thi Ha and I am a student at UTS. My supervisors are A/Prof. John Buchanan and A/Prof. Wan Ng.

WHAT IS THIS RESEARCH ABOUT?
This study is aimed at exploring the impacts of flipped instruction (as a reversal of conventional teaching wherein video lectures are given before class for home study, and 'traditional homework' is moved into the classroom) on EFL (English as a Foreign Language) students' attitudes, their performance and use of formulaic sequences (i.e. multi-word expressions that native speakers tend to use) in academic writing. This will help identify potential and limitations of flipped classroom in order to provide a more balanced view and useful guidance for researchers and practitioners.

FUNDING
I am on a UTS International Research Scholarship and UTS President's Scholarship for my PhD study.

WHY HAVE I BEEN ASKED?
You have been invited to participate in this study because you are an EFL teacher in charge of Writing classes at HCMC University of Technology and Education, Vietnam.

IF I SAY YES, WHAT WILL IT INVOLVE?
If you decide to participate, I will invite you to

- Implement flipped classroom model which includes making video clips and designing online activities
- Let me observe four teaching sessions (two sessions for each class)
- Participate in two one-hour semi-structured interviews that will be audio recorded and transcribed

ARE THERE ANY RISKS/INCONVENIENCE?
Yes, there are some risks/inconvenience. Interview time will be negotiated with you to ensure it does not conflict with your work. You might feel uncomfortable having me as a classroom observer and sharing information in the interview. There are no other physical or mental risks.

DO I HAVE TO SAY YES?
Participation in this study is voluntary. It is completely up to you whether or not you decide to take part.

WHAT WILL HAPPEN IF I SAY NO?
If you decide not to participate, it will not affect your relationship with the researchers or the University of Technology Sydney. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting me on ThiHa.Do@student.uts.edu.au.

If you withdraw, I will not collect additional information from you, although information already collected will be retained to ensure that the results of the research project can be measured properly. You should be aware that data collected up to the time you withdraw will form part of the research project results.

CONFIDENTIALITY
By signing the consent form you consent to the research team collecting and using personal information about you for the research project. All this information will be treated confidentially. All the real names and other identifying personal details will be removed before coding and storing. All the electronic files will be password protected and will only be accessible to me and my supervisors.

Table A.18.
Information Sheet & Consent Form

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

We plan to publish the results of this study. In any publication, information will be provided in such a way that you cannot be identified.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?

If you have concerns about the research that you think I or my supervisors can help you with, please feel free to contact us on ThiHa.Do@student.uts.edu.au or John.Buchanan@uts.edu.au.

You will be given a copy of this form to keep.

NOTE:
This study has been approved by the University of Technology Sydney Human Research Ethics Committee [UTS HREC]. If you have any concerns or complaints about any aspect of the conduct of this research, please contact the Ethics Secretariat on ph.: +61 2 9514 2478 or email: Research.Ethics@uts.edu.au], and quote the UTS HREC reference number. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome.

Table A.19.
Information Sheet & Consent Form

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

TEACHER CONSENT FORM
The Impacts of Flipped Classroom Approaches on EFL Students' Attitudes, Performance and Use of Formulaic Sequences in Academic Writing in a Vietnamese Higher Education Context
UTS HREC *ETH18-2960*

I _____ *[participant's name]* agree to participate in the research project **The Impacts of Flipped Classroom Approaches on EFL Students' Attitudes, Performance and Use of Formulaic Sequences in Academic Writing in a Vietnamese Higher Education Context** *[UTS HREC ETH18-2960]* being conducted by Do Thi Ha, UTS student, ThiHa.Do@student.uts.edu.au.

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney.

I understand that I will be given a signed copy of this document to keep.

I agree to be:
☐ Audio recorded

I agree that the research data gathered from this project may be published in a form that:

☐ Does not identify me in any way
☐ May be used for future research purposes

I am aware that I can contact Do Thi Ha if I have any concerns about the research.

_____ ____/____/____
Name and Signature [participant] Date

_____ ____/____/____
Name and Signature [researcher or delegate] Date

Table A.20.
Information Sheet & Consent Form

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

STUDENT INFORMATION SHEET
The Impacts of Flipped Classroom Approaches on EFL Students' Attitudes, Performance and Use of Formulaic Sequences in Academic Writing in a Vietnamese Higher Education Context
UTS HREC ETH18-2960

WHO IS DOING THE RESEARCH?
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WHAT IS THIS RESEARCH ABOUT?
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FUNDING
I am on a UTS International Research Scholarship and UTS President's Scholarship for my PhD study.

WHY HAVE I BEEN ASKED?
You have been invited to participate in this study because you are an EFL student at HCMC University of Technology and Education, Vietnam.

IF I SAY YES, WHAT WILL IT INVOLVE?
If you decide to participate, I will invite you to

- Participate in a flipped classroom which includes viewing video clips and doing online activities
- Let me observe two in-class sessions
- Answer a pre-questionnaire, two post-questionnaires & six mini-surveys that take around two hours in total
- Participate in a one-hour focus group interview that will be audio recorded and transcribed (20 students will be involved)

ARE THERE ANY RISKS/INCONVENIENCE?
Yes, there are some risks/inconvenience. Interview time will be negotiated with you to ensure it does not conflict with your study. You might feel uncomfortable having me as a classroom observer and sharing information in the interview. There are no other physical or mental risks.

DO I HAVE TO SAY YES?
Participation in this study is voluntary. It is completely up to you whether or not you decide to take part. Your participation (or not) will not affect course progression or assessments marks.

WHAT WILL HAPPEN IF I SAY NO?
If you decide not to participate, it will not affect your relationship with the researchers or the University of Technology Sydney. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting me on ThiHa.Do@student.uts.edu.au.

If you withdraw, I will not collect additional information from you, although information already collected will be retained to ensure that the results of the research project can be measured properly. You should be aware that data collected up to the time you withdraw will form part of the research project results.

CONFIDENTIALITY
By signing the consent form you consent to the research team collecting and using personal information about you for the research project. All this information will be treated confidentially. All the real names and

Table A.21.
Information Sheet & Consent Form

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

other identifying personal details will be removed before coding and storing. All the electronic files will be password protected and will only be accessible to me and my supervisors.
We plan to publish the results of this study. In any publication, information will be provided in such a way that you cannot be identified.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?
If you have concerns about the research that you think I or my supervisors can help you with, please feel free to contact us on ThiHa.Do@student.uts.edu.au or John.Buchanan@uts.edu.au.

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Table A.22.
Information Sheet & Consent Form

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UTS HREC *ETH18-2960*

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I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

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I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney.

I understand that I will be given a signed copy of this document to keep.

I agree to be:
☐ Audio recorded

I agree that the research data gathered from this project may be published in a form that:

☐ Does not identify me in any way
☐ May be used for future research purposes

I am aware that I can contact Do Thi Ha if I have any concerns about the research.

_____ ____/____/____
Name and Signature [participant] Date

_____ ____/____/____
Name and Signature [researcher or delegate] Date

Table A.23.
Invitation Letter

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

TEACHER INVITATION LETTER
The Impacts of Flipped Classroom Approaches on EFL Students' Attitudes and Performance in Academic Writing in a Vietnamese Higher Education Context
UTS HREC *ETH18-2960*

Dear ……..

My name is Do Thi Ha and I am a student at the University of Technology, Sydney.

I am conducting research into flipped classroom approaches and would welcome your assistance. This study is aimed at exploring the impacts of flipped instruction (as a reversal of conventional teaching wherein video lectures are given before class for home study, and 'traditional homework' is moved into the classroom) on EFL (English as a Foreign Language) students' attitudes, their performance and use of formulaic sequences (i.e. multi-word expressions that native speakers tend to use) in academic writing. The research will involve your implementation of a flipped classroom model along with classroom observations and interviews which should take no more than three hours of your time. I have asked you to participate because you are an EFL teacher in charge of Writing classes at HCMC University of Technology and Education, Vietnam.

If you are interested in participating, *I would be glad if you would contact me via email at ThiHa.Do@student.uts.edu.au.

You are under no obligation to participate in this research.

Yours sincerely,

Do Thi Ha
UTS student
15 Broadway Ultimo
9514 5285
ThiHa.Do@student.uts.edu.au

NOTE:
This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 2478 Research.Ethics@uts.edu.au), and quote the UTS HREC reference number. Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Table A.24.
Invitation Letter

STUDENT INVITATION LETTER
The Impacts of Flipped Classroom Approaches on EFL Students' Attitudes and Performance in Academic Writing in a Vietnamese Higher Education Context
UTS HREC *ETH18-2960*

Dear ……..

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If you are interested in participating, *I would be glad if you would contact me via email at ThiHa.Do@student.uts.edu.au.

You are under no obligation to participate in this research.

Yours sincerely,

Do Thi Ha
UTS student
15 Broadway Ultimo
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NOTE:
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Appendix B

Following are the learning analytics recorded by Edpuzzle for the time the students spent on Videos 1-5. The total amount of time spent on videos was recorded in minutes, in which students could view each video segment for a number of times. The "+" symbol signifies each additional time students logged in to view the videos. The grey shading shows the lack of watching activity while no shading means 100% watching. The other colour codes together with the percentage make it clearer what video portion (less than 100%) was actually viewed.

Table B.1.
Time Spent on Videos in Phase 1

Student	Video 1 (3:27)	Video 2 (2:01)	Video 3 (6:41)	Video 4 (7:53)	Video 5 (1:48)
1	5'	2'	7'	8'	2'
2					
3	3'	3' (90%)		9'	2
4	3' (70%)	1' (40%)		6' (70%)	1' (80%)
5	7'	3'	9'	8'	2'
6	5'	4'		11'	2'
7	4' + 4' + 4'	2' + 4' + 2'	8'	9' + 8'	2'
8			7'	8'	3'
9	4'	4'	7'	6' (70%)	
10	5'	3' (90%)	8'	8'	2'
11	4'	3'	7'	9'	2'
12	3'	2'	7'	9'	2' (90%)
13	4'	2'	7'	8'	2'
14	5'				
15					
16	4'	1' (40%)	8'	9'	2'
17	5'	2' (40%)	8'	9'	2'
18	4'	2'	8'	10'	2'
19	5'	6'	15' + 10'	17' + 8'	2'
20	9'	5'	7' + 7'	20' + 13'	2' + 2'
21	8'	6'	16'	8'	3'
Viewed	18	17	15	18	17

In Phase 1, three of the activities were set as "Multiple Attempts" so that students could practise as much as they wish (except for Activities 3 and 4 which allow only one submission). Different time

records after the "+" symbol mean that the students took the quiz more than once. The grey shading was, again, applied to unsubmitted activities, and no shading for the completed ones.

Table B.2.
Time Spent on Some Moodle Activities in Phase 1

Student	Activity 1	Activity 2	Activity 3 (1 attempt allowed)	Activity 4 (1 attempt allowed)	Activity 5
1	1'35"	4'34" + 3'16"	1'6"	16'57"	4'43"
2				17'2"	6'57"
3			5'4"		
4	3'3" + 32"		1'46"	18'30"	3'13"
5			10'1"	11'41"	
6	4'59"		1'19"		
7	5'2"	9'46" + 1'21" + 1'10"	1'4"	7'15"	14'27"
8	5'6"	21 days	3'11"	22'18"	4'50"
9	2'48"	1'38"	7'34"	6 days 2 hours	16'2" + 31" + 32"
10	4'40"	9'50"	2'39"	12'49"	7'44"
11	4'23"	7'12" + 5'58"	2'48"	36'44"	4'3"
12	10'55"	2 days 19 hours + 1'41"	3'36"	1 day	6'48"
13	3'28"	5'22"	1'28"	9'25"	4'40"
14					
15					
16	3'2"		1'55"		
17	2'58" + 1'20"	7'14" + 3'33"	1'25"	23 hours 14'	15'56"
18	18'46"	7'40"	1'32"	19'16"	6'30"
19	6'34" + 58"	30'51"	9'42"	29'17"	12'33"
20		15'55" + 2'48"	3'18"	2 days 2 hours	3'6" + 22"
21	8'3"	6'3"	1'36"		
Done	15	13	18	15	14

Table B.3.
Time Spent on Videos in Phase 2

Student	Activity 6 (5:18)	Activity 7 (9:13)	Activity 8 (3:55)
1	6'	14'	4'
2			
3	6'	8' (90%)	4'
4	6'	8' (90%)	3' (50%)
5	11'	12'	5'

Student	Activity 6 (5:18)	Activity 7 (9:13)	Activity 8 (3:55)
6	9’	21’	4’
7	12’	10’	5’
8			
9	4’ (70%)		3’ (80%)
10	7’	9’	5’
11	6’		’
12	7’	18’	4’ (90%)
13	5’	9’	4’
14			
15			
16	5’	10’	4’
17	6’	9’	4’
18	7’	15’	
19	15’	24’	6’
20	11’	9’	4’
21	15’		
Done	17	14	15

Table B.4.

Time Spent on Some Moodle Activities in Phase 2

Student	Activity 6	Activity 7	Activity 8	Submission for online peer review
1	2’29"	9’28" + 2’48"	5’31" + 1’26"	
2	9’	6 days 22 hours + 1’22" + 1’26"	2’25" + 1’16" + 1’10" + 8’10"	
3				
4	2’36"	7’59"	3’41"	
5			4’35"	
6				
7	5’40"	13’32"	6’35"	
8	6’24"	15’57"	24’20"	
9	2’35"	1 day 4 hours + 2’6"	6’11" + 2’23" + 1’21" + 55"	
10	3’48"	10’54"	7’25"	
11	9’7"	33’14" + 1’36"	7’13" + 1’25"	
12	4’34"	5’52" + 1’11"	7’38" + 1’14"	
13	5’44"	7’33"	5’18"	
14				
15				
16	3’48"			
17	3’38"	9’20" + 4’47"	3’21" + 1’18"	
18	3’48"	13’7" + 1’18"	7’14"	
19	1’39"	3’57"	21’40" + 2’56"	
20	4’21" 16"	5’52" 1’15"	3’13" 1’24" + 1’21"	
21				
Done	15	14	15	12

Table B.5.
Wilcoxon Signed Rank Tests for Pair Samples

Question Item	***Phase 1***				***Phase 2***			
	Pre	***Pos 1***	***Z***	***p-value***	***Post 1***	***Post 2***	***Z***	***p-value***
	Mean (*SD*)	*Mean* (*SD*)			*Mean* (*SD*)	*Mean* (*SD*)		
Motivation in EAW								
1. I enjoy writing academic essays.	3.43 (0.68)	3.62 (0.87)	1.414	0.157	3.62 (0.87)	3.38 (0.87)	1.633	0.102
2. I believe writing could be of some value to me.	4.48 (0.60)	4.88 (0.51)	0.000	1.000	4.48 (0.51)	4.43 (0.51)	0.447	0.655
3. I like to write even if my writing will not be graded.	3.10 (1.00)	3.05 (0.92)	0.184	0.854	3.05 (0.92)	3.14 (0.91)	0.312	0.755
4. I think I do pretty well in writing, compared to my classmates.	2.33 (0.86)	2.52 (0.75)	1.633	0.102	2.52 (0.75)	2.70 (0.57)	**2.000***	**0.046**
Engagement in EAW								
5. I always finish my writing homework before class.	3.57 (0.87)	3.95 (0.67)	**1.999***	**0.046**	3.95 (0.67)	3.76 (0.77)	1.265	0.206
6. During writing class, I ask questions to help me learn.	2.86 (0.96)	3.05 (0.87)	1.414	0.157	3.05 (0.87)	3.24 (0.89)	1.633	0.102
7. I feel excited about the things I learn in writing class.	3.76 (0.83)	3.95 (0.67)	1.155	0.248	3.95 (0.67)	4.14 (0.36)	1.414	0.157
8. I often look for ways to improve my writing.	3.95 (0.74)	3.81 (0.75)	1.134	0.257	3.81 (0.75)	3.90 (0.63)	0.707	0.480
Perceived Effectiveness in EAW								
9. My writing has improved with time.	3.48 (1.23)	3.52 (1.17)	0.277	0.782	3.52 (1.08)	3.67 (1.15)	1.134	0.257
10. I am able to clearly express my ideas in writing.	3.05 (0.92)	3.24 (0.77)	1.155	0.248	3.24 (0.77)	3.19 (0.68)	0.333	0.739
11. I know how to use VOCABULARY appropriately in my writing.	2.76 (1.00)	3.24 (0.83)	**2.352***	**0.019**	3.24 (0.83)	3.29 (0.64)	0.577	0.564
12. I know how to use COLLOCATIONS appropriately in my writing.	2.62 (0.92)	2.95 (0.74)	**1.941**$^{\#1}$	**0.052**	2.95 (0.74)	3.10 (0.54)	1.134	0.257
13. I know how to make an appropriate essay organisation.	3.33 (0.73)	3.95 (0.59)	**3.127****	**0.002**	3.95 (0.59)	3.71 (0.72)	**2.236***	**0.025**
14. Before-class tasks help me prepare for the lessons better.	3.76 (1.00)	4.05 (0.50)	1.513	0.130	4.05 (0.50)	4.38 (0.50)	**2.646****	**0.008**
15. Peers' editing helps me improve my writing.	4.10 (0.63)	3.95 (0.50)	1.000	0.317	3.95 (0.50)	4.24 (0.54)	1.732	0.083
16. A teacher's feedback helps me improve my writing.	4.52 (0.68)	4.43 (0.68)	0.5541	0.589	4.43 (0.68)	4.57 (0.51)	1.000	0.317

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table B.6.
Rank ANCOVAs for Students' Attitudes to Academic Writing across the Phrases

Question Item	***F***	***p-value***
Motivation in EAW		
1. I enjoy writing academic essays.	**5.675***	**0.022**
2. I believe writing could be of some value to me.	0.072	0.790
3. I like to write even if my writing will not be graded.	0.292	0.592
4. I think I do pretty well in writing, compared to my classmates.	0.118	0.733
Engagement in EAW		
5. I always finish my writing homework before class.	**4.265***	**0.045**
6. During writing class, I ask questions to help me learn.	0.279	0.600
7. I feel excited about the things I learn in writing class.	0.831	0.367
8. I often look for ways to improve my writing.	0.769	0.386
Perceived Effectiveness in EAW		
9. My writing has improved with time.	0.888	0.352
10. I am able to clearly express my ideas in writing.	0.195	0.661
11. I know how to use VOCABULARY appropriately in my writing.	2.445	0.126
12. I know how to use COLLOCATIONS appropriately in my writing.	0.040	0.842
13. I know how to make an appropriate essay organisation.	**10.593****	0.002
14. Before-class tasks help me prepare for the lessons better.	**3.793**$^{\#1}$	**0.059**
15. Peers' editing helps me improve my writing.	**3.828**$^{\#2}$	**0.057**
16. A teacher's feedback helps me improve my writing.	0.861	0.359
* ***significant at the 5% level,*** ** ***significant at the 1% level***		

Table B.7.
Rank ANCOVAs for Low and High Performers' Attitudes to Academic Writing in each Phase

	Phase 1		***Phase 1***	
Question Item	***F***	***p-value***	***F***	***p-value***
Motivation in EAW				
1. I enjoy writing academic essays.	0.220	0.644	0.707	0.411
2. I believe writing could be of some value to me.	1.770	0.199	0.136	0.717
3. I like to write even if my writing will not be graded.	0.493	0.491	0.137	0.715
4. I think I do pretty well in writing, compared to my classmates.	0.507	0.485	0.063	0.805
Engagement in EAW				
5. I always finish my writing homework before class.	**10.620****	0.004	0.570	0.460
6. During writing class, I ask questions to help me learn.	0.129	0.724	1.648	0.215
7. I feel excited about the things I learn in writing class.	3.205	0.089	0.044	0.837
8. I often look for ways to improve my writing.	0.905	0.353	0.337	0.568
Perceived Effectiveness in EAW				
9. My writing has improved with time.	1.031	0.323	0.002	0.966
10. I am able to clearly express my ideas in writing.	1.197	0.288	**9.712****	**0.006**
11. I know how to use VOCABULARY appropriately in my writing.	0.167	0.687	2.325	0.144
12. I know how to use COLLOCATIONS appropriately in my writing.	0.194	0.664	0.149	0.704
13. I know how to make an appropriate essay organisation.	1.763	0.200	0.160	0.693
14. Before-class tasks help me prepare for the lessons better.	0.768	0.392	2.827	0.109
15. Peers' editing helps me improve my writing.	1.407	0.250	0.180	0.676

Question Item	Phase 1 F	Phase 1 p-value	Phase 1 F	Phase 1 p-value
16. A teacher's feedback helps me improve my writing.	0.248	0.624	0.141	0.712
* ***significant at the 5% level,*** ** ***significant at the 1% level***				

Table B.8.
Rank ANCOVAs for Low and High Performers' Attitudes to Academic Writing Across the Phases

Question Item	Low F	Low p-value	High F	High p-value
Motivation in EAW				
1. I enjoy writing academic essays.	3.363	0.083	2.090	0.164
2. I believe writing could be of some value to me.	0.157	0.697	0.201	0.659
3. I like to write even if my writing will not be graded.	0.002	0.964	0.325	0.576
4. I think I do pretty well in writing, compared to my classmates.	0.273	0.608	0.016	0.902
Engagement in EAW				
5. I always finish my writing homework before class.	1.294	0.270	3.409	0.080
6. During writing class, I ask questions to help me learn.	0.450	0.511	3.548	0.074
7. I feel excited about the things I learn in writing class.	**5.921***	**0.026**	0.732	0.402
8. I often look for ways to improve my writing.	**4.235**#1	**0.054**	0.071	0.793
Perceived Effectiveness in EAW				
9. My writing has improved with time.	0.96	0.309	0.003	0.958
10. I am able to clearly express my ideas in writing.	1.444	0.245	0.241	0.629
11. I know how to use VOCABULARY appropriately in my writing.	1.742	0.203	0.091	0.766
12. I know how to use COLLOCATIONS appropriately in my writing.	0.071	0.792	0.025	0.875
13. I know how to make an appropriate essay organisation.	**4.955***	**0.039**	**5.007***	**0.037**
14. Before-class tasks help me prepare for the lessons better.	1.085	0.311	2.532	0.127
15. Peers' editing helps me improve my writing.	**5.179***	**0.035**	0.464	0.504
16. A teacher's feedback helps me improve my writing.	0.325	0.576	0.387	0.541
* ***significant at the 5% level,*** ** ***significant at the 1% level***				

Table B.9.
Wilcoxon Signed Rank Tests for Pair Samples

Student perceptions of learning experiences	Post-questionnaire 1 Mean (SD)	Post-questionnaire 2 Mean textit(SD)	Z	p-value
1. Classroom time is used more effectively in the FC then the lecture-based (traditional) classroom.	3.71 (0.72)	3.71 (0.72)	0.000	1.000
2. I feel I am more in charge of my learning in a TRADITIONAL classroom.	2.95 (0.74)	2.95 (0.67)	0.000	1.000
3. I participate more in the FC activities than in TRADITIONAL classroom.	3.86 (0.73)	4.00 (0.45)	0.905	0.366
*4. I **DO NOT** enjoy FC.*	2.33 (0.73)	1.90 (0.77)	**2.066***	**0.039**
5. I think the online videos/materials guide me toward better understanding of the course topics.	4.05 (0.50)	3.95 (0.50)	0.707	0.480

Student perceptions of learning experiences	***Post-questionnaire 1***	***Post-questionnaire 2***	***Z***	***p-value***
	Mean *(SD)*	***Mean*** textit(SD)		
6. I prefer TRADITIONAL lectures in class to video lessons at home.	2.86 (0.85)	2.62 (0.67)	1.406	0.160
7. I feel the flipped instructions ***DOES NOT*** *help my learning.*	1.95 (0.87)	1.71 (0.64)	1.213	0.225
8. The FC facilities more communication between me and my teacher.	3.43 (0.75)	3.52 (0.68)	0.707	0.480
9. The FC facilities more communication between me and my classmates.	3.76 (0.83)	3.86 (0.57)	0.535	0.593
10. Generally, I am happy and satisfied with the flipped learning experience.	4.00 (0.45)	4.24 (0.54)	1.508	0.132
* ***significant at the 5% level,*** ** ***significant at the 1% level***				

Table B.10.
Interrater reliability of Class A

Subskills	***Kappa***			
	Test 1	***Test 2***	***Test 3***	***Test 4***
Task addressing	0.95	1.00	1.00	0.94
Coherence & Cohesion	0.89	1.00	0.94	1.00
Lexical resource	1.00	1.00	1.00	1.00
Grammatical range & Accuracy	1.00	0.95	0.94	0.94
Overall score	0.85	0.95	0.89	0.89

Table B.11.
Text Analysis of Test 1

Student	**Academic Words**		**Academic Phrases**		**Metadiscourse**		**Word Count**	
	Types	**Tokens**	**Types**	**Tokens**	**Types**	**Tokens**	**Total Types**	**Total Tokens**
1	17	36	14	17	35	82	185	415
2	8	14	4	5	19	35	114	**231**
3	8	12	9	9	14	26	107	**213**
4	6	18	4	4	21	42	127	273
5	10	19	4	4	7	21	106	**200**
6	9	12	4	4	10	14	81	**119**
7	11	27	5	6	18	32	107	276
8	6	12	5	6	17	44	93	**186**
9	15	28	9	10	23	48	142	281
10	9	18	11	14	20	44	132	280
11	13	16	9	10	17	35	169	311
12	20	24	4	4	13	21	154	**248**
13	10	11	10	11	20	35	125	**228**
14	9	10	2	2	13	18	129	**182**
15	10	17	2	2	6	14	89	**161**

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
16	6	14	3	3	15	31	116	**212**
17	10	14	5	7	19	43	117	**220**
18	17	32	10	14	21	30	115	**245**
19	8	21	5	6	20	54	125	282
20	10	18	4	4	20	40	134	311
21	6	18	8	14	21	76	151	413

Table B.12.
Text Analysis of Test 2

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
1	18	30	19	26	35	86	217	517
2	19	31	5	7	19	40	159	349
3	10	15	3	4	14	42	121	273
4	9	16	9	12	19	37	138	258
5	3	12	8	8	12	28	126	296
6	8	14	4	4	17	34	107	**199**
7	9	20	9	11	22	50	148	369
8	6	13	5	9	22	79	148	334
9	13	25	9	11	21	39	147	303
10	12	20	10	11	23	69	151	340
11	23	38	17	20	24	43	201	451
12	19	27	8	8	23	33	162	296
13	8	15	16	22	17	37	154	331
14	18	19	2	2	17	22	141	**205**
15	8	13	4	4	16	29	143	285
16	9	16	7	11	20	32	126	265
17	9	13	11	13	25	55	159	318
18	20	38	14	16	31	68	179	417
19	12	24	7	7	20	45	166	356
20	13	23	12	20	35	92	243	701
21	16	26	11	13	29	81	185	437

Table B.13.
Text Analysis of Test 3

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
1	11	13	10	14	20	39	152	284
2	14	15	13	14	25	36	181	318
3	20	20	4	4	18	39	189	335
4	13	16	7	7	18	32	151	275

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
5	5	7	8	10	11	24	131	269
6	6	6	4	5	10	13	128	**234**
7	6	6	5	9	12	23	140	322
8	11	13	7	9	16	32	157	281
9	8	8	10	12	18	22	161	295
10	11	13	14	18	25	45	155	344
11	16	18	11	11	17	22	183	325
12	13	13	13	14	15	32	179	310
13	10	10	12	16	22	34	167	315
14	12	12	6	6	18	23	145	**220**
15	6	7	7	8	11	15	125	**244**
16	3	4	5	5	18	32	131	252
17	11	13	7	13	19	42	160	293
18	9	9	9	11	19	35	144	293
19	14	15	7	10	28	71	180	375
20	5	7	12	16	16	29	143	324
21	15	18	8	12	30	67	172	404

Table B.14.
Text Analysis of Test 4

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
1	23	26	12	15	22	52	207	418
2	11	12	8	10	26	55	159	335
3	6	8	5	8	15	36	114	251
4	14	16	7	7	25	50	164	328
5	4	5	10	13	21	32	153	299
6	6	7	16	16	22	36	176	338
7	8	8	8	11	20	31	154	326
8	8	11	11	12	25	61	178	334
9	11	12	10	10	24	38	188	333
10	7	8	13	13	17	39	140	315
11	19	19	13	18	29	49	213	418
12	25	27	16	18	29	55	202	389
13	12	12	12	16	19	35	176	323
14	15	16	8	9	22	30	180	298
15	12	16	7	11	21	38	163	355
16	3	3	9	14	22	49	157	338
17	12	12	11	14	27	46	201	405
18	12	13	5	5	18	23	156	312
19	13	18	4	7	18	34	153	290
20	15	19	13	15	38	81	257	625
21	17	19	17	21	26	75	211	499

Table B.15.
Rank ANCOVAs for Subskills Across the Phases

Subskills	***Phase 1***			***Phase 2***			***F***	***p-value***
	Test1	***Test2***	***Rate of improvement***	***Test3***	***Test4***	***Rate of improvement***		
	Mean (*SD*)	***Mean*** (*SD*)		***Mean*** (*SD*)	***Mean*** (*SD*)			
Task Addressing	4.98 (1.25)	5.83 (1.16)	22.36%	5.55 (1.08)	6.10 (1.15)	10.34%	1.586	0.215
Coherence & Cohesion	5.17 (1.35)	5.88 (1.26)	16.12%	5.69 (1.23)	6.12 (1.16)	8.27%	1.873	0.179
Lexical Resource	5.24 (1.19)	5.81 (1.23)	12.05%	5.55 (1.05)	5.88 (1.18)	5.89%	0.802	0.376
Grammatical Range & Accuracy	5.43 (1.29)	5.74 (1.21)	7.21%	5.67 (1.16)	5.81 (1.18)	2.78%	0.195	0.661
Overall Score	5.20 (1.23)	5.82 (1.17)	13.76%	5.62 (1.08)	5.98 (1.15)	6.51%	1.453	0.235

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table B.16.
Rank ANCOVAs for Subskills of Low and High Performers Across the Phases

Subskills	***Low***		***F***	***p-value***	***High***		***F***	***p-value***
	Rate of improvement				***Rate of improvement***			
	Phase 1	***Phase 2***			***Phase 1***	***Phase 2***		
Task Addressing	31.10%	9.85%	0.118	0.735	14.42%	10.79%	0.586	0.453
Coherence & Cohesion	22.55%	9.27%	0.829	0.375	10.27%	7.36%	2.741	0.113
Lexical Resource	12.44%	3.57%	0.093	0.763	11.69%	8.00%	1.889	0.185
Grammatical Range & Accuracy	10.24%	4.13%	0.066	0.800	4.45%	1.56%	**4.597***	**0.044**
Overall Score	17.91%	6.33%	0.121	0.732	9.99%	6.68%	3.101	0.094

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table B.17.
Rank ANCOVAs for Lexical Resource Across the Phases

Lexical Resource	***Phase 1***			***Phase 2***			***F***	***p-value***
	Test1	***Test2***	***Rate of improvement***	***Test3***	***Test4***	***Rate of improvement***		
	Mean (*SD*)	***Mean*** (*SD*)		***Mean*** (*SD*)	***Mean*** (*SD*)			
Types of academic words	10.38 (3.93)	12.48 (5.35)	27%	10.43 (4.29)	12.05 (5.76)	25%	0.293	0.591
Tokens of academic words	18.62 (7.12)	21.33 (8.05)	21%	11.57 (4.53)	13.67 (6.32)	26%	2.386	0.130

Lexical Resource	Phase 1			Phase 2				
	Test1 Mean (*SD*)	Test2 Mean (*SD*)	Rate of improvement	Test3 Mean (*SD*)	Test4 Mean (*SD*)	Rate of improvement	*F*	*p-value*
Types of academic phrases	6.24 (3.32)	9.05 (4.65)	58%	8.52 (3.08)	10.24 (3.70)	33%	0.073	0.788
Tokens of academic phrases	7.43 (4.47)	11.38 (6.41)	78%	10.67 (3.94)	12.52 (4.13)	33%	0.050	0.825
Types of metadiscourse	17.57 (6.17)	21.95 (6.27)	34%	18.38 (5.37)	23.14 (5.13)	37%	0.984	0.327
Tokens of metadiscourse	37.38 (17.74)	49.57 (21.03)	43%	33.67 (14.44)	45.00 (14.75)	51%	0.000	0.991
Total types	124.67 (25.61)	158.14 (32.50)	29%	155.90 (19.61)	176.29 (31.62)	15%	0.037	0.848
Total tokens	251.76 (72.85)	347.62 (112.49)	41%	300.57 (44.97)	358.52 (81.96)	21%	0.716	0.403

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table B.18.
Rank ANCOVAs for Lexical Resource of Low and High Performers Across the Phases

Lexical Resource	Low				High			
	Rate of improvement		*F*	*p-value*	Rate of improvement		*F*	*p-value*
	Phase 1	Phase 2			Phase 1	Phase 2		
Types of academic words	24%	4%	0.000	0.988	30%	44%	0.009	0.927
Tokens of academic words	15%	8%	3.299	0.086	27%	42%	0.150	0.702
Types of academic phrases	46%	54%	1.091	0.310	68%	13%	2.398	0.137
Tokens of academic phrases	61%	49%	0.378	0.547	93%	18%	0.873	0.361
Types of metadiscourse	37%	42%	3.255	0.088	31%	33%	0.093	0.763
Tokens of metadiscourse	50%	61%	0.083	0.777	38%	43%	0.166	0.688
Total types	32%	9%	0.137	0.715	26%	20%	0.002	0.968
Total tokens	43%	15%	0.083	0.777	38%	26%	0.856	0.366

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Appendix C

Following are the learning analytics recorded by Edpuzzle for the time the students spent on Videos 1-5. The total amount of time spent on videos was recorded in minutes, in which students could view each video segment for a number of times. The grey shading shows the lack of watching activity while no shading means 100% watching. The other colour codes together with the percentage make it clearer what video portion (less than 100%) was actually viewed.

Table C.1.
Time Spent on Videos in Phase 1

Student	Video 1 (3:27)	Video 2 (2:01)	Video 3 (6:41)	Video 4 (7:53)	Video 5 (1:48)
1	3’	2’ (90%)	9’	8’	2’
2	5’	2’	8’	9’	2’
3	4’	3’	7’	8’	
4	5’	2’			
5	4’	3’	9’	8’	
6	4’	4’	9’	8’	4’
7	4’	3’	9’	9’	4’
8	7’	2’	8’	9’	2’
9	4’	5’	7’	9’	2’
10	6’	2’		8’	2’
11	5’	2’	7’	8’	2’

Table C.2.
Time Spent on Some Moodle Activities in Phase 1

Student	Activity 1	Activity 2	Activity 3 (1 attempt allowed)	Activity 4 (1 attempt allowed)	Activity 5
1		6’1"	1’6"	21’38"	4’4"
2			4’33"	34’56"	5’12"
3		3’46"	58"		
4	29’39”	11’4”	5’30”	24’54”	5’34”
5	4 days	4 days 16 hours	2’42”	49’53”	2 days 22 hours
6	6’23”	8’25” 1’15” 1 day 15 hours	3’25”	28’5”	8’42” 51”

Student	Activity 1	Activity 2	Activity 3 (1 attempt allowed)	Activity 4 (1 attempt allowed)	Activity 5
7	6'2"	28'49" 1'35"	1'52"	21'28"	37'39" 1' 18"
8	4'58"	13'42" 2'19"	1'57"	17'19"	4'32"
9	4'40" 56"	8'27" 1'13"	2'1"	36'12"	5'54" 22"
10	3'11"	6'7"	1'48"	10'17"	
11	9'11"	6'30"	1'8"	15'29"	3'5"

Table C.3.
Wilcoxon Signed Rank Tests for Pair Samples

Question Item	***Phase 1***				***Phase 2***			
	Pre	***Pos 1***	***Z***	***p-value***	***Post 1***	***Post 2***	***Z***	***p-value***
	Mean (SD)	*Mean (SD)*			*Mean (SD)*	*Mean (SD)*		
Motivation in EAW								
1. I enjoy writing academic essays.	3.73 (1.01)	3.27 (0.91)	1.890	0.059	3.27 (0.91)	3.36 (0.81)	1.000	0.317
2. I believe writing could be of some value to me.	4.91 (0.30)	4.55 (0.52)	1.633	0.102	4.55 (0.52)	4.45 (0.52)	0.577	0.564
3. I like to write even if my writing will not be graded.	3.18 (1.08)	2.73 (0.79)	1.095	0.273	2.73 (0.79)	3.18 (0.75)	1.098	0.272
4. I think I do pretty well in writing, compared to my classmates.	2.27 (1.01)	2.36 (1.03)	0.577	0.564	2.36 (1.03)	2.82 (0.87)	1.667	0.096
Engagement in EAW								
5. I always finish my writing homework before class.	3.64 (0.67)	3.73 (0.91)	0.333	0.739	3.73 (0.91)	4.18 (0.60)	1.289	0.197
6. During writing class, I ask questions to help me learn.	2.45 (0.93)	2.55 (1.13)	0.322	0.748	2.55 (1.13)	2.91 (1.04)	1.633	0.102
7. I feel excited about the things I learn in writing class.	4.00 (0.78)	3.82 (0.75)	0.816	0.414	3.82 (0.75)	4.00 (0.45)	0.816	0.414
8. I often look for ways to improve my writing.	3.73 (1.19)	4.00 (1.00)	1.732	0.083	4.00 (1.00)	4.00 (0.63)	0.000	1.000
Perceived Effectiveness in EAW								
9. My writing has improved with time.	3.09 (1.30)	3.55 (0.52)	1.406	0.160	3.55 (0.52)	3.45 (0.93)	0.333	0.739
10. I am able to clearly express my ideas in writing.	3.18 (0.75)	3.09 (0.83)	0.447	0.655	3.09 (0.93)	2.91 (0.83)	0.632	0.527
11. I know how to use VOCABULARY appropriately in my writing.	3.55 (0.69)	3.36 (1.27)	0.707	0.480	3.36 (1.21)	3.00 (0.89)	0.877	0.380
12. I know how to use COLLOCATIONS appropriately in my writing.	3.09 (0.70)	2.82 (1.08)	1.134	0.257	2.82 (1.08)	2.73 (0.65)	0.000	1.000
13. I know how to make an appropriate essay organisation.	3.36 (0.81)	3.64 (1.12)	1.134	0.257	3.64 (1.12)	3.64 (0.92)	0.000	1.000

Question Item	Phase 1				Phase 2			
	Pre	Pos 1	Z	p-value	Post 1	Post 2	Z	p-value
	Mean (SD)	Mean (SD)			Mean (SD)	Mean (SD)		
14. Before-class tasks help me prepare for the lessons better.	3.64 (0.67)	4.18 (0.75)	**2.449***	**0.014**	4.18 (0.75)	4.09 (0.70)	0.378	0.705
15. Peers' editing helps me improve my writing.	4.36 (0.51)	4.00 (0.45)	**2.000***	**0.046**	4.00 (0.45)	4.27 (0.79)	1.342	0.180
16. A teacher's feedback helps me improve my writing.	4.73 (0.47)	4.45 (0.52)	1.732	0.083	4.45 (0.52)	4.45 (0.52)	0.000	1.000
* ***significant at the 5% level,*** ** ***significant at the 1% level***								

Table C.4.
Rank ANCOVAs for Students' Attitudes to Academic Writing across the Phrases

Question Item	F	p-value
Motivation in EAW		
1. I enjoy writing academic essays.	3.730	0.068
2. I believe writing could be of some value to me.	0.001	0.973
3. I like to write even if my writing will not be graded.	1.291	0.269
4. I think I do pretty well in writing, compared to my classmates.	2.481	0.131
Engagement in EAW		
5. I always finish my writing homework before class.	1.138	0.299
6. During writing class, I ask questions to help me learn.	0.585	0.453
7. I feel excited about the things I learn in writing class.	1.112	0.304
8. I often look for ways to improve my writing.	0.633	0.436
Perceived Effectiveness in EAW		
9. My writing has improved with time.	0.805	0.380
10. I am able to clearly express my ideas in writing.	0.204	0.656
11. I know how to use VOCABULARY appropriately in my writing.	1.074	0.312
12. I know how to use COLLOCATIONS appropriately in my writing.	0.087	0.771
13. I know how to make an appropriate essay organisation.	0.883	0.359
14. Before-class tasks help me prepare for the lessons better.	1.620	0.218
15. Peers' editing helps me improve my writing.	3.576	0.073
16. A teacher's feedback helps me improve my writing.	2.344	0.141
* ***significant at the 5% level,*** ** ***significant at the 1% level***		

Table C.5.
Rank ANCOVAs for Low and High Performers' Attitudes to Academic Writing in each Phase

Question Item	Phase 1		Phase 1	
	F	p-value	F	p-value
Motivation in EAW				
1. I enjoy writing academic essays.	1.706	0.224	0.213	0.656
2. I believe writing could be of some value to me.	**12.774***	**0.006**	0.463	0.514
3. I like to write even if my writing will not be graded.	0.001	0.971	0.232	0.642
4. I think I do pretty well in writing, compared to my classmates.	0.000	0.993	0.726	0.416

Question Item	Phase 1		Phase 1	
	F	***p-value***	***F***	***p-value***
Engagement in EAW				
5. I always finish my writing homework before class.	0.363	0.562	1.109	0.320
6. During writing class, I ask questions to help me learn.	0.147	0.711	4.000	0.077
7. I feel excited about the things I learn in writing class.	0.092	0.768	0.001	0.981
8. I often look for ways to improve my writing.	0.006	0.942	2.965	0.119
Perceived Effectiveness in EAW				
9. My writing has improved with time.	0.041	0.843	**6.415***	**0.032**
10. I am able to clearly express my ideas in writing.	3.114	0.111	0.436	0.526
11. I know how to use VOCABULARY appropriately in my writing.	0.040	0.845	5.042	0.051
12. I know how to use COLLOCATIONS appropriately in my writing.	1.671	0.228	**6.739***	**0.029**
13. I know how to make an appropriate essay organisation.	0.013	0.913	4.679	0.059
14. Before-class tasks help me prepare for the lessons better.	0.021	0.888	0.234	0.640
15. Peers' editing helps me improve my writing.	0.217	0.652	2.234	0.169
16. A teacher's feedback helps me improve my writing.	0.111	0.746	0.000	1.000
* ***significant at the 5% level,*** ** ***significant at the 1% level***				

Table C.6.

Rank ANCOVAs for Low and High Performers' Attitudes to Academic Writing Across the Phases

Question Item	Low		High	
	F	***p-value***	***F***	***p-value***
Motivation in EAW				
1. I enjoy writing academic essays.	1.486	0.258	1.935	0.194
2. I believe writing could be of some value to me.	0.065	0.806	0.659	0.436
3. I like to write even if my writing will not be graded.	0.962	0.355	1.057	0.328
4. I think I do pretty well in writing, compared to my classmates.	3.105	0.116	0.684	0.428
Engagement in EAW				
5. I always finish my writing homework before class.	1.267	0.293	0.628	0.446
6. During writing class, I ask questions to help me learn.	0.018	0.897	1.575	0.238
7. I feel excited about the things I learn in writing class.	0.775	0.404	0.314	0.588
8. I often look for ways to improve my writing.	0.974	0.353	0.110	0.747
Perceived Effectiveness in EAW				
9. My writing has improved with time.	**7.128***	**0.028**	0.534	0.482
10. I am able to clearly express my ideas in writing.	0.084	0.779	0.806	0.391
11. I know how to use VOCABULARY appropriately in my writing.	0.430	0.530	0.896	0.366
12. I know how to use COLLOCATIONS appropriately in my writing.	0.453	0.520	0.027	0.874
13. I know how to make an appropriate essay organisation.	1.100	0.325	0.000	0.983
14. Before-class tasks help me prepare for the lessons better.	1.304	0.286	0.365	0.559
15. Peers' editing helps me improve my writing.	0.000	1.000	**5.067***	**0.048**
16. A teacher's feedback helps me improve my writing.	0.571	0.471	1.538	0.243
* ***significant at the 5% level,*** ** ***significant at the 1% level***				

Table C.7.
Wilcoxon Signed Rank Tests for Pair Samples

Student perceptions of learning experiences	***Post-questionnaire 1***	***Post-questionnaire 2***	***Z***	***p-value***
	Mean *(SD)*	***Mean*** textit(SD)		
1. Classroom time is used more effectively in the FC then the lecture-based (traditional) classroom.	4.00 (0.45)	3.73 (0.91)	0.707	0.480
2. I feel I am more in charge of my learning in a TRADITIONAL classroom.	2.73 (0.91)	2.82 (1.08)	0.439	0.660
3. I participate more in the FC activities than in TRADITIONAL classroom.	3.55 (0.82)	4.00 (0.78)	1.518	0.129
*4. I **DO NOT** enjoy FC.*	2.18 (0.75)	1.82 (0.60)	1.414	0.157
5. I think the online videos/materials guide me toward better understanding of the course topics.	4.09 (0.54)	4.09 (0.70)	0.000	1.000
6. I prefer TRADITIONAL lectures in class to video lessons at home.	2.55 (0.93)	2.64 (0.92)	0.447	0.655
*7. I feel the flipped instructions **DOES NOT** help my learning.*	1.73 (0.47)	1.82 (0.75)	0.378	0.705
8. The FC facilities more communication between me and my teacher.	3.27 (1.01)	3.27 (1.01)	0.000	1.000
9. The FC facilities more communication between me and my classmates.	3.55 (0.82)	3.55 (0.93)	0.000	1.000
10. Generally, I am happy and satisfied with the flipped learning experience.	4.00 (0.45)	4.00 (0.63)	0.000	1.000
**** significant at the 5% level, ** significant at the 1% level***				

Table C.8.
Interrater reliability of Class A

Subskills	***Kappa***			
	Test 1	***Test 2***	***Test 3***	***Test 4***
Task addressing	0.78	1.00	0.89	1.00
Coherence & Cohesion	0.88	1.00	0.88	0.88
Lexical resource	0.89	1.00	0.89	1.00
Grammatical range & Accuracy	1.00	0.89	1.00	0.89
Overall score	0.60	0.90	0.70	0.79

Table C.9.
Text Analysis of Test 1

Student	**Academic Words**		**Academic Phrases**		**Metadiscourse**		**Word Count**	
	Types	**Tokens**	**Types**	**Tokens**	**Types**	**Tokens**	**Total Types**	**Total Tokens**
1	11	23	10	14	26	60	177	419
2	11	17	4	5	24	47	126	281
3	17	27	5	7	14	29	138	**233**

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
4	12	29	2	4	17	49	115	267
5	5	22	2	4	14	33	119	296
6	6	15	5	5	23	44	134	262
7	9	46	6	6	24	79	171	502
8	13	18	4	4	15	34	144	**249**
9	10	23	4	11	12	33	121	**249**
10	20	24	12	15	20	31	165	294
11	9	17	3	6	17	37	121	**244**

Table C.10.
Text Analysis of Test 2

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
1	12	17	9	12	22	65	175	384
2	9	14	8	13	24	40	148	375
3	21	30	6	11	21	46	169	375
4	15	29	8	11	24	46	165	355
5	14	24	10	15	19	55	146	378
6	11	17	11	13	23	54	183	406
7	15	26	6	6	18	56	160	387
8	15	23	5	5	15	31	169	346
9	6	13	8	10	20	39	150	350
10	28	31	13	14	24	42	208	358
11	17	40	5	5	13	47	134	323

Table C.11.
Text Analysis of Test 3

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
1	12	15	6	8	27	47	157	375
2	9	11	8	8	22	49	175	313
3	15	16	8	9	23	42	202	413
4	11	15	7	9	16	32	150	292
5	10	12	5	6	19	36	128	289
6	4	4	6	8	11	24	119	**221**
7	13	20	5	7	18	53	167	366
8	6	7	2	5	19	41	154	**240**
9	10	10	5	6	19	33	143	282
10	16	16	15	18	26	38	212	347
11	14	15	7	8	17	33	156	278

Table C.12.
Text Analysis of Test 4

Student	Academic Words		Academic Phrases		Metadiscourse		Word Count	
	Types	Tokens	Types	Tokens	Types	Tokens	Total Types	Total Tokens
1	12	13	7	8	33	63	197	412
2	4	4	14	14	28	55	166	348
3	12	14	4	5	22	43	179	341
4	13	16	5	8	26	54	183	424
5	6	11	6	8	20	46	144	326
6	5	6	12	12	21	39	147	304
7	11	22	7	11	19	44	176	440
8	7	9	5	6	18	30	154	269
9	9	10	8	12	19	35	164	307
10	19	23	7	7	24	32	201	292
11	11	14	10	11	20	44	184	351

Table C.13.
Rank ANCOVAs for Subskills Across the Phases

Subskills	***Phase 1***			***Phase 2***			***F***	***p-value***
	Test1	***Test2***	***Rate of improvement***	***Test3***	***Test4***	***Rate of improvement***		
	Mean (*SD*)	***Mean*** (*SD*)		***Mean*** (*SD*)	***Mean*** (*SD*)			
Task Addressing	5.96 (0.85)	7.05 (0.52)	19.76%	6.14 (0.92)	6.68 (0.68)	9.70%	**11.263****	**0.003**
Coherence & Cohesion	6.00 (0.89)	6.91 (0.58)	16.42%	6.32 (0.78)	6.41 (0.70)	1.70%	**28.815****	**0.000**
Lexical Resource	6.05 (1.19)	6.96 (1.23)	16.91%	6.23 (1.05)	6.36 (1.18)	2.13%	**18.030****	**0.000**
Grammatical Range & Accuracy	6.27 (1.23)	6.59 (1.02)	6.05%	6.32 (1.10)	6.36 (1.14)	0.65%	4.152	0.055
Overall Score	6.07 (1.03)	6.88 (0.74)	14.60%	6.25 (0.94)	6.46 (0.90)	3.44%	**23.845****	0.000

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table C.14.
Rank ANCOVAs for Subskills of Low and High Performers Across the Phases

Subskills	***Low***		***F***	***p-value***	***High***		***F***	***p-value***
	Rate of improvement				***Rate of improvement***			
	Phase 1	***Phase 2***			***Phase 1***	***Phase 2***		
Task Addressing	27.49%	13.02%	3.888	0.084	13.31%	6.94%	4.393	0.063
Coherence & Cohesion	25.33%	3.64%	**6.155***	**0.038**	8.99%	0.08%	**5.270***	**0.045**

Subskills	Low				High			
	Rate of improvement		F	p-value	Rate of improvement		F	p-value
	Phase 1	Phase 2			Phase 1	Phase 2		
Lexical Resource	27.33%	2.22%	**14.046****	**0.006**	8.22%	2.05%	3.694	0.084
Grammatical Range & Accuracy	11.89%	0.00%	**6.332***	**0.036**	1.19%	1.19%	0.008	0.932
Overall Score	22.90%	4.70%	**8.118***	**0.022**	7.69%	2.40%	**7.530***	**0.021**

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table C.15.
Rank ANCOVAs for Lexical Resource Across the Phases

Lexical Resource	Phase 1			Phase 2				
	Test1	Test2	Rate of improvement	Test3	Test4	Rate of improvement	F	p-value
	Mean (*SD*)	Mean (*SD*)		Mean (*SD*)	Mean (*SD*)			
Types of academic words	11.18 (4.38)	14.82 (5.93)	43%	10.91 (3.67)	9.91 (4.32)	−8%	**9.698****	**0.005**
Tokens of academic words	23.73 (8.59)	24.00 (8.31)	9%	12.82 (4.58)	12.91 (5.92)	3%	0.198	0.661
Types of academic phrases	5.18 (3.16)	8.09 (2.55)	103%	6.73 (3.23)	7.73 (3.10)	34%	0.920	0.349
Tokens of academic phrases	7.36 (4.07)	10.45 (3.59)	73%	8.36 (3.44)	9.27 (2.87)	23%	0.650	0.430
Types of metadiscourse	18.73 (4.88)	20.27 (3.74)	14%	19.73 (4.59)	22.73 (4.63)	19%	0.419	0.525
Tokens of metadiscourse	43.27 (15.15)	47.36 (9.55)	16%	38.91 (8.54)	44.09 (10.16)	17%	0.759	0.394
Total types	139.18 (22.33)	164.27 (20.40)	19%	160.27 (28.10)	172.27 (19.05)	9%	0.029	0.867
Total tokens	299.64 (84.11)	367 (23.13)	28%	310.55 (58.94)	346.73 (56.44)	14%	4.05	0.059

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table C.16.
Rank ANCOVAs for Lexical Resource of Low and High Performers Across the Phases

Lexical Resource	Low				High			
	Rate of improvement		F	p-value	Rate of improvement		F	p-value
	Phase 1	Phase 2			Phase 1	Phase 2		
Types of academic words	33%	−6%	2.202	0.176	51%	−9%	4.733	0.055
Tokens of academic words	−15%	−2%	0.001	0.980	28%	7%	0.059	0.813

Lexical Resource	***Low***				***High***			
	Rate of improvement		***F***	***p-value***	***Rate of improvement***		***F***	***p-value***
	Phase 1	***Phase 2***			***Phase 1***	***Phase 2***		
Types of academic phrases	102%	41%	0.047	0.835	103%	28%	0.717	0.417
Tokens of academic phrases	96%	34%	0.020	0.891	54%	14%	0.351	0.567
Types of metadiscourse	0%	42%	1.273	0.292	25%	1%	0.155	0.702
Tokens of metadiscourse	−4%	32%	0.031	0.865	33%	4%	0.275	0.612
Total types	18%	14%	0.581	0.468	21%	5%	4.040	0.072
Total tokens	18%	25%	0.354	0.568	37%	4%	**6.888***	**0.025**

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Appendix D

Table D.1.
Rank ANCOVAs for AW Attitudes of Each Level Across the Classes (Class A vs Class B in Each Phase)

		Phase 1		***Phase 1***	
Question Item		***F***	***p-value***	***F***	***p-value***
Motivation in EAW					
1. I enjoy writing academic essays.	*Low*	**4.842***	**0.046**	0.578	0.461
	High	2.235	0.156	0.308	0.587
	Total	**7.284***	**0.011**	1.049	0.314
2. I believe writing could be of some value to me.	*Low*	0.110	0.746	1.005	0.180
	High	0.136	0.718	0.095	0.763
	Total	0.008	0.928	0.003	0.958
3. I like to write even if my writing will not be graded.	*Low*	0.335	0.573	0.076	0.787
	High	0.108	0.747	0.025	0.877
	Total	1.195	0.283	0.002	0.968
4. I think I do pretty well in writing, compared to my classmates.	*Low*	0.012	0.915	0.037	0.850
	High	0.078	0.783	2.525	0.133
	Total	0.929	0.343	0.881	0.356
Engagement in EAW					
5. I always finish my writing homework before class.	*Low*	0.064	0.805	**6.385***	**0.025**
	High	1.583	0.228	1.191	0.292
	Total	0.349	0.559	**4.113**$^{\#1}$	**0.052**
6. During writing class, I ask questions to help me learn.	*Low*	0.096	0.761	0.293	0.598
	High	2.715	0.120	0.250	0.625
	Total	0.466	0.500	0.031	0.862
7. I feel excited about the things I learn in writing class.	*Low*	0.016	0.902	0.522	0.483
	High	1.863	0.192	0.049	0.828
	Total	1.039	0.316	0.622	0.437
8. I often look for ways to improve my writing.	*Low*	2.223	0.160	1.515	0.240
	High	1.018	0.329	1.901	0.188
	Total	2.700	0.111	0.000	1.000
Perceived Effectiveness in EAW					
9. My writing has improved with time.	*Low*	1.629	0.224	**12.037****	**0.004**
	High	0.039	0.845	0.472	0.503
	Total	0.450	0.507	1.373	0.251
10. I am able to clearly express my ideas in writing.	*Low*	3.213	0.096	0.082	0.779
	High	0.002	0.964	2.116	0.166
	Total	0.485	0.491	0.823	0.371

Question Item		*Phase 1*		*Phase 1*	
		F	***p-value***	***F***	***p-value***
11. I know how to use VOCABULARY appropriately in my writing.	*Low*	1.338	0.268	**7.585***	**0.016**
	High	0.069	0.797	0.271	0.610
	Total	0.611	0.441	2.858	0.101
12. I know how to use COLLOCATIONS appropriately in my writing.	*Low*	**7.844***	**0.015**	**6.030***	**0.029**
	High	0.188	0.671	0.011	0.918
	Total	3.059	0.091	2.520	0.123
13. I know how to make an appropriate essay organisation.	*Low*	0.099	0.758	0.119	0.735
	High	1.046	0.323	2.202	0.159
	Total	0.975	0.331	0.874	0.357
14. Before-class tasks help me prepare for the lessons better.	*Low*	1.242	0.285	2.340	0.150
	High	0.313	0.584	0.855	0.370
	Total	1.575	0.219	2.559	0.120
15. Peers' editing helps me improve my writing.	*Low*	1.698	0.215	0.438	0.520
	High	2.225	0.157	1.769	0.203
	Total	0.024	0.878	0.079	0.780
16. A teacher's feedback helps me improve my writing.	*Low*	0.785	0.392	1.588	0.230
	High	0.010	0.921	0.035	0.855
	Total	0.294	0.592	0.520	0.476

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table D.2.
Rank ANCOVAs for FC Perceptions of Each Level Across the Classes (Class A vs Class B in Each Phase)

Student perceptions of learning experiences			***Post-questionnaire 1***	***Post-questionnaire 2***	***F***	***p-value***
			Mean *(SD)*	***Mean*** *(SD)*		
1. Classroom time is used more effectively in the FC then the lecture-based (traditional) classroom.	Low	Class A	3.50	3.60		
		Class B	4.00	4.00		
	High	Class A	3.91	3.82	0.582	0.457
		Class B	4.00	3.50		
	Total	Class A	3.71	3.71	0.013	0.909
		Class B	4.00	3.73		
2. I feel I am more in charge of my learning in a TRADITIONAL classroom.	Low	Class A	3.10	2.90		
		Class B	2.80	2.40		
	High	Class A	2.82	3.00	2.127	0.165
		Class B	2.67	3.17		
	Total	Class A	2.95	2.95	0.003	0.960
		Class B	2.73	2.82		
3. I participate more in the FC activities than in TRADITIONAL classroom.	Low	Class A	3.90	4.00		
		Class B	3.40	3.80		
	High	Class A	3.82	4.00	0.692	0.419
		Class B	3.67	4.17		
	Total	Class A	3.86	4.00	0.151	0.701
		Class B	3.55	4.00		
*4. I **DO NOT** enjoy FC.*	Low	Class A	2.40	2.20		
		Class B	2.20	1.80		
	High	Class A	2.27	1.64	0.628	0.441
		Class B	2.17	1.83		
	Total	Class A	2.33	1.90	0.007	0.934
		Class B	2.18	1.82		
5. I think the online videos/materials guide me toward better understanding of the course topics.	Low	Class A	3.90	3.90		
		Class B	4.20	4.20		
	High	Class A	4.18	4.00	0.035	0.854
		Class B	4.00	4.00		
	Total	Class A	4.05	3.95	0.374	0.546
		Class B	4.09	4.09		

Student perceptions of learning experiences			*Post-questionnaire 1*	*Post-questionnaire 2*	*F*	*p-value*
			Mean (SD)	*Mean (SD)*		
6. I prefer TRADITIONAL lectures in class to video lessons at home.	Low	Class A	3.00	2.70		
		Class B	2.60	2.40		
	High	Class A	2.73	2.55	0.697	0.417
		Class B	2.50	2.83		
	Total	Class A	2.86	2.62	0.076	0.784
		Class B	2.55	2.64		
*7. I feel the flipped instructions **DOES NOT** help my learning.*	Low	Class A	2.20	1.80		
		Class B	2.00	1.60		
	High	Class A	1.73	1.64	1.492	0.241
		Class B	1.50	2.00		
	Total	Class A	1.95	1.71	0.305	0.585
		Class B	1.73	1.82		
8. The FC facilities more communication between me and my teacher.	Low	Class A	3.70	3.80		
		Class B	3.00	3.00		
	High	Class A	3.18	3.27	0.115	0.740
		Class B	3.50	3.50		
	Total	Class A	3.43	3.52	1.146	0.293
		Class B	3.27	3.27		
9. The FC facilities more communication between me and my classmates.	Low	Class A	4.10	4.00		
		Class B	3.40	3.40		
	High	Class A	3.45	3.73	0.103	0.752
		Class B	3.67	3.67		
	Total	Class A	3.76	3.86	0.898	0.351
		Class B	3.55	3.55		
10. Generally, I am happy and satisfied with the flipped learning experience.	Low	Class A	4.20	4.20		
		Class B	4.00	4.00		
	High	Class A	3.82	4.27	0.767	0.395
		Class B	4.00	4.00		
	Total	Class A	4.00	4.24	1.218	0.278
		Class B	4.00	4.00		

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table D.3.
Rank ANCOVAs for Subskills of Each Level Across the Classes (Class A vs Class B in Each Phase)

		Phase 1		***Phase 2***	
Subskills		*F*	*p-value*	*F*	*p-value*
Task Addressing	*Low*	3.304	0.092	**6.292***	**0.026**
	High	1.541	0.234	0.065	0.803
	Total	**6.840***	**0.014**	0.926	0.344
Coherence & Cohesion	*Low*	4.126	0.063	0.678	0.425
	High	0.120	0.734	3.444	0.083
	Total	**5.598***	**0.025**	**6.177***	**0.019**
Lexical Resource	*Low*	**13.661****	**0.003**	0.356	0.561
	High	0.063	0.805	0.866	0.367
	Total	**4.134**$^{\#1}$	**0.051**	**4.019**$^{\#3}$	**0.054**
Grammatical Range & Accuracy	*Low*	2.411	0.145	0.335	0.573
	High	0.185	0.673	0.020	0.888
	Total	1.500	0.230	0.751	0.393
Overall Score	*Low*	**12.372****	**0.004**	0.550	0.471
	High	0.181	0.676	1.029	0.326
	Total	**8.661****	**0.006**	**4.062**$^{\#2}$	**0.053**

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Table D.4.
Rank ANCOVAs for Lexical Resource of Each Level Across the Classes (Class A vs Class B in Each Phase)

		Phase 1		***Phase 2***	
Subskills		*F*	*p-value*	*F*	*p-value*
Types of academic words	*Low*	3.413	0.088	0.041	0.843
	High	0.486	0.497	**5.758***	**0.030**
	Total	0.621	0.437	2.374	0.134
Tokens of academic words	*Low*	0.257	0.620	0.007	0.934
	High	0.146	0.708	1.917	0.186
	Total	0.021	0.886	0.766	0.389
Total types	*Low*	0.279	0.606	0.780	0.393
	High	0.228	0.640	1.355	0.263
	Total	0.000	0.998	0.072	0.790
Total tokens	*Low*	1.040	0.326	2.242	0.158
	High	0.697	0.417	1.987	0.179
	Total	0.627	0.435	0.004	0.947
Types of academic phrases	*Low*	0.655	0.433	0.189	0.671
	High	0.699	0.416	2.429	0.140
	Total	0.008	0.930	2.074	0.160

		Phase 1		***Phase 2***	
Subskills		*F*	*p-value*	*F*	*p-value*
Tokens of academic phrases	*Low*	1.240	0.286	0.148	0.707
	High	1.387	0.257	2.822	0.114
	Total	0.000	0.997	3.006	0.093
Types of metadiscourse	*Low*	0.314	0.585	1.146	0.304
	High	1.720	0.209	0.461	0.507
	Total	0.507	0.482	0.092	0.764
Tokens of metadiscourse	*Low*	0.714	0.413	0.380	0.548
	High	0.008	0.931	0.807	0.383
	Total	0.027	0.870	0.058	0.811

* ***significant at the 5% level,*** ** ***significant at the 1% level***

Appendix E

The sig-values (i.e., p-values) less than 5% (in bold) indicate the violation of the normality distribution assumption in the ANCOVA model.

Table E.1.
Tests of Normality in Class A

Tests of Normality for Questionnaire Items in Class A

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Period		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PosQ1	Period1	.358	21	.000	.720	21	**.000**
	Period2	.363	20	.000	.715	20	**.000**
Residual for PosQ2	Period1	.348	21	.000	.640	21	**.000**
	Period2	.387	20	.000	.626	20	**.000**
Residual for PosQ3	Period1	.241	21	.002	.907	21	**.048**
	Period2	.238	20	.004	.836	20	**.003**
Residual for PosQ4	Period1	.404	21	.000	.655	21	**.000**
	Period2	.450	20	.000	.583	20	**.000**
Residual for PosQ5	Period1	.386	21	.000	.726	21	**.000**
	Period2	.251	20	.002	.800	20	**.001**
Residual for PosQ6	Period1	.240	21	.003	.849	21	**.004**
	Period2	.264	20	.001	.810	20	**.001**
Residual for PosQ7	Period1	.290	21	.000	.800	21	**.001**
	Period2	.509	20	.000	.433	20	**.000**
Residual for PosQ8	Period1	.315	21	.000	.840	21	**.003**
	Period2	.351	20	.000	.754	20	**.000**
Residual for PosQ9	Period1	.348	21	.000	.640	21	**.000**
	Period2	.413	20	.000	.608	20	**.000**
Residual for PosQ10	Period1	.288	21	.000	.856	21	**.005**
	Period2	.263	20	.001	.800	20	**.001**
Residual for PosQ11	Period1	.292	21	.000	.833	21	**.002**
	Period2	.276	20	.000	.780	20	**.000**
Residual for PosQ12	Period1	.383	21	.000	.696	21	**.000**
	Period2	.372	20	.000	.728	20	**.000**
Residual for PosQ13	Period1	.342	21	.000	.757	21	**.000**
	Period2	.309	20	.000	.842	20	**.004**
Residual for PosQ14	Period1	.395	21	.000	.675	21	**.000**
	Period2	.413	20	.000	.608	20	**.000**
Residual for PosQ15	Period1	.395	21	.000	.675	21	**.000**
	Period2	.375	20	.000	.720	20	**.000**
Residual for PosQ16	Period1	.325	21	.000	.749	21	**.000**
	Period2	.361	20	.000	.637	20	**.000**

Table E.2.
Tests of Normality in Class B

Tests of Normality for Questionnaire Items in Class B

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Period		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PosQ1	Period1	.236	11	.088	.881	11	.107
	Period2	.285	11	.013	.752	11	**.002**
Residual for PosQ2	Period1	.353	11	.000	.649	11	**.000**
	Period2	.353	11	.000	.649	11	**.000**
Residual for PosQ3	Period1	.277	11	.018	.799	11	**.009**
	Period2	.414	11	.000	.718	11	**.001**
Residual for PosQ4	Period1	.275	11	.020	.879	11	.100
	Period2	.280	11	.016	.785	11	**.006**
Residual for PosQ5	Period1	.437	11	.000	.671	11	**.000**
	Period2	.346	11	.001	.774	11	**.004**
Residual for PosQ6	Period1	.231	11	.104	.876	11	.093
	Period2	.263	11	.033	.829	11	**.023**
Residual for PosQ7	Period1	.232	11	.100	.822	11	.018
	Period2	.409	11	.000	.627	11	**.000**
Residual for PosQ8	Period1	.227	11	.117	.863	11	.064
	Period2	.318	11	.003	.795	11	**.008**
Residual for PosQ9	Period1	.353	11	.000	.649	11	**.000**
	Period2	.323	11	.002	.843	11	**.035**
Residual for PosQ10	Period1	.227	11	.120	.819	11	**.017**
	Period2	.227	11	.120	.819	11	**.017**
Residual for PosQ11	Period1	.337	11	.001	.841	11	**.033**
	Period2	.232	11	.101	.795	11	**.008**
Residual for PosQ12	Period1	.251	11	.051	.920	11	.321
	Period2	.300	11	.007	.793	11	**.008**
Residual for PosQ13	Period1	.264	11	.031	.854	11	**.048**
	Period2	.380	11	.000	.772	11	**.004**
Residual for PosQ14	Period1	.232	11	.100	.822	11	**.018**
	Period2	.279	11	.017	.822	11	**.018**
Residual for PosQ15	Period1	.409	11	.000	.627	11	**.000**
	Period2	.277	11	.018	.799	11	**.009**
Residual for PosQ16	Period1	.353	11	.000	.649	11	**.000**
	Period2	.353	11	.000	.649	11	**.000**

Table E.3.
Tests of Normality in Class A in Phase 1

Tests of Normality for Low and High Performers in Class A in Phase 1

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PosQ1	Low	.335	10	.002	.808	10	**.018**
	High	.303	11	.006	.760	11	**.003**
Residual for PosQ2	Low	.433	10	.000	.594	10	**.000**
	High	.401	11	.000	.625	11	**.000**
Residual for PosQ3	Low	.324	10	.004	.794	10	**.012**
	High	.195	11	.200*	.948	11	.620
Residual for PosQ4	Low	.362	10	.001	.717	10	**.001**
	High	.432	11	.000	.619	11	**.000**
Residual for PosQ5	Low	.416	10	.000	.650	10	**.000**
	High	.448	11	.000	.572	11	**.000**
Residual for PosQ6	Low	.246	10	.089	.874	10	.111
	High	.401	11	.000	.625	11	**.000**
Residual for PosQ7	Low	.433	10	.000	.594	10	**.000**
	High	.232	11	.100	.822	11	**.018**
Residual for PosQ8	Low	.272	10	.035	.802	10	**.015**
	High	.362	11	.000	.795	11	**.008**
Residual for PosQ9	Low	.433	10	.000	.594	10	**.000**
	High	.448	11	.000	.572	11	**.000**
Residual for PosQ10	Low	.254	10	.067	.833	10	**.036**
	High	.332	11	.001	.756	11	**.002**
Residual for PosQ11	Low	.360	10	.001	.774	10	**.007**
	High	.282	11	.015	.786	11	**.006**
Residual for PosQ12	Low	.360	10	.001	.774	10	**.007**
	High	.409	11	.000	.627	11	**.000**
Residual for PosQ13	Low	.324	10	.004	.794	10	**.012**
	High	.385	11	.000	.724	11	**.001**
Residual for PosQ14	Low	.400	10	.000	.658	10	**.000**
	High	.385	11	.000	.724	11	**.001**
Residual for PosQ15	Low	.482	10	.000	.509	10	**.000**
	High	.385	11	.000	.724	11	**.001**
Residual for PosQ16	Low	.305	10	.009	.781	10	**.008**
	High	.332	11	.001	.756	11	**.002**

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.4.
Tests of Normality in Class A in Phase 2

Tests of Normality for Low and High Performers in Class A in Phase 2

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PPosQ1	Low	.278	9	.044	.853	9	.081
	High	.282	11	.015	.786	11	**.006**
Residual for PPosQ2	Low	.471	9	.000	.536	9	**.000**
	High	.353	11	.000	.649	11	**.000**
Residual for PPosQ3	Low	.223	9	.200*	.838	9	.055
	High	.263	11	.033	.829	11	**.023**
Residual for PPosQ4	Low	.396	9	.000	.684	9	**.001**
	High	.492	11	.000	.486	11	**.000**
Residual for PPosQ5	Low	.356	9	.002	.655	9	**.000**
	High	.227	11	.120	.819	11	**.017**
Residual for PPosQ6	Low	.192	9	.200*	.917	9	.364
	High	.401	11	.000	.625	11	**.000**
Residual for PPosQ7	Low	.519	9	.000	.390	9	**.000**
	High	.492	11	.000	.486	11	**.000**
Residual for PPosQ8	Low	.297	9	.021	.813	9	**.028**
	High	.385	11	.000	.724	11	**.001**
Residual for PPosQ9	Low	.356	9	.002	.655	9	**.000**
	High	.448	11	.000	.572	11	**.000**
Residual for PPosQ10	Low	.414	9	.000	.617	9	**.000**
	High	.401	11	.000	.625	11	**.000**
Residual for PPosQ11	Low	.351	9	.002	.781	9	**.012**
	High	.332	11	.001	.756	11	**.002**
Residual for PPosQ12	Low	.351	9	.002	.781	9	**.012**
	High	.385	11	.000	.724	11	**.001**
Residual for PPosQ13	Low	.333	9	.005	.763	9	**.008**
	High	.279	11	.017	.822	11	**.018**
Residual for PPosQ14	Low	.519	9	.000	.390	9	**.000**
	High	.353	11	.000	.649	11	**.000**
Residual for PPosQ15	Low	.414	9	.000	.617	9	**.000**
	High	.346	11	.001	.774	11	**.004**
Residual for PPosQ16	Low	.356	9	.002	.655	9	**.000**
	High	.353	11	.000	.649	11	**.000**

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.5.
Tests of Normality in Class B in Phase 1

Tests of Normality for Low and High Performers in Class B in Phase 1

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PosQ1	Low	.323	5	.096	.785	5	.061
	High	.238	6	.200*	.950	6	.737
Residual for PosQ2	Low	.473	5	.001	.552	5	**.000**
	High	.492	6	.000	.496	6	**.000**
Residual for PosQ3	Low	.231	5	.200*	.881	5	.314
	High	.293	6	.117	.822	6	.091
Residual for PosQ4	Low	.367	5	.026	.684	5	**.006**
	High	.202	6	.200*	.853	6	.167
Residual for PosQ5	Low	.473	5	.001	.552	5	**.000**
	High	.401	6	.003	.770	6	**.031**
Residual for PosQ6	Low	.273	5	.200*	.852	5	.201
	High	.183	6	.200*	.960	6	.820
Residual for PosQ7	Low	.231	5	.200*	.881	5	.314
	High	.254	6	.200*	.866	6	.212
Residual for PosQ8	Low	.237	5	.200*	.961	5	.814
	High	.293	6	.117	.822	6	.091
Residual for PosQ9	Low	.367	5	.026	.684	5	**.006**
	High	.407	6	.002	.640	6	**.001**
Residual for PosQ10	Low	.349	5	.046	.771	5	**.046**
	High	.319	6	.056	.683	6	**.004**
Residual for PosQ11	Low	.136	5	.200*	.987	5	.967
	High	.492	6	.000	.496	6	**.000**
Residual for PosQ12	Low	.404	5	.008	.768	5	**.044**
	High	.492	6	.000	.496	6	**.000**
Residual for PosQ13	Low	.254	5	.200*	.914	5	.492
	High	.254	6	.200*	.866	6	.212
Residual for PosQ14	Low	.473	5	.001	.552	5	**.000**
	High	.302	6	.094	.775	6	**.035**
Residual for PosQ15	High	.333	6	.036	.827	6	.101
Residual for PosQ16	Low	.473	5	.001	.552	5	**.000**
	High	.407	6	.002	.640	6	**.001**

Table E.6.
Tests of Normality in Class B in Phase 2

Tests of Normality[b,d,e] for Low and High Performers in Class B in Phase 2

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PPosQ1	Low	.300	5	.161	.883	5	.325
	High	.293	6	.117	.822	6	.091
Residual for PPosQ2	Low	.367	5	.026	.684	5	**.006**
	High	.319	6	.056	.683	6	**.004**
Residual for PPosQ3	Low	.300	5	.161	.883	5	.325
	High	.492	6	.000	.496	6	**.000**
Residual for PPosQ4	Low	.473	5	.001	.552	5	**.000**
	High	.293	6	.117	.822	6	.091
Residual for PPosQ5	High	.293	6	.117	.822	6	.091
Residual for PPosQ6	Low	.349	5	.046	.771	5	**.046**
	High	.223	6	.200*	.908	6	.421
Residual for PPosQ7	High	.333	6	.036	.827	6	.101
Residual for PPosQ8	Low	.367	5	.026	.684	5	**.006**
	High	.407	6	.002	.640	6	**.001**
Residual for PPosQ9	Low	.473	5	.001	.552	5	**.000**
	High	.202	6	.200*	.853	6	.167
Residual for PPosQ10	Low	.349	5	.046	.771	5	**.046**
	High	.254	6	.200*	.866	6	.212
Residual for PPosQ11	Low	.473	5	.001	.552	5	**.000**
	High	.319	6	.056	.683	6	**.004**
Residual for PPosQ12	Low	.473	5	.001	.552	5	**.000**
	High	.492	6	.000	.496	6	**.000**
Residual for PPosQ13	Low	.367	5	.026	.684	5	**.006**
	High	.333	6	.036	.827	6	.101
Residual for PPosQ14	High	.302	6	.094	.775	6	**.035**
Residual for PPosQ15	Low	.300	5	.161	.883	5	.325
	High	.392	6	.004	.701	6	**.006**
Residual for PPosQ16	Low	.473	5	.001	.552	5	**.000**
	High	.407	6	.002	.640	6	**.001**

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

b. Residual for PPosQ5 is constant when Level = Low. It has been omitted.

d. Residual for PPosQ7 is constant when Level = Low. It has been omitted.

e. Residual for PPosQ14 is constant when Level = Low. It has been omitted.

Table E.7.
Tests of Normality in Class A

Tests of Normality for Tests in Class A

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Period		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PosT	Period1	.222	21	.008	.922	21	.096
	Period2	.235	21	.004	.913	21	.063
Residual for PosC	Period1	.116	21	.200*	.947	21	.295
	Period2	.126	21	.200*	.969	21	.714
Residual for PosL	Period1	.141	21	.200*	.943	21	.251
	Period2	.136	21	.200*	.966	21	.644
Residual for PosG	Period1	.136	21	.200*	.944	21	.262
	Period2	.206	21	.020	.929	21	.131
Residual for PosM	Period1	.113	21	.200*	.966	21	.635
	Period2	.100	21	.200*	.976	21	.856

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.8.
Tests of Normality in Class B

Tests of Normality for Tests in Class B

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Period		Statistic	df	Sig.	Statistic	df	Sig.
Residual for PosT	Period1	.153	11	.200*	.951	11	.651
	Period2	.148	11	.200*	.937	11	.482
Residual for PosC	Period1	.202	11	.200*	.903	11	.204
	Period2	.175	11	.200*	.931	11	.425
Residual for PosL	Period1	.106	11	.200*	.987	11	.992
	Period2	.155	11	.200*	.945	11	.575
Residual for PosG	Period1	.204	11	.200*	.910	11	.242
	Period2	.177	11	.200*	.856	11	.051
Residual for PosM	Period1	.150	11	.200*	.958	11	.752
	Period2	.146	11	.200*	.964	11	.818

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.9.
Tests of Normality in Class A in Phase 1

Tests of Normality for Tests in Class A in Phase 1

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for Pos1T	Low	.174	10	.200*	.942	10	.573
	High	.221	11	.139	.865	11	.067
Residual for Pos1C	Low	.168	10	.200*	.908	10	.268
	High	.241	11	.073	.887	11	.128
Residual for Pos1L	Low	.137	10	.200*	.943	10	.591
	High	.183	11	.200*	.909	11	.238
Residual for Pos1G	Low	.281	10	.024	.887	10	.157
	High	.194	11	.200*	.938	11	.498
Residual for Pos1M	Low	.159	10	.200*	.933	10	.479
	High	.164	11	.200*	.938	11	.496

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.10.
Tests of Normality in Class A in Phase 2

Tests of Normality for Tests in Class A in Phase 2

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for Pos2T	Low	.255	10	.065	.862	10	.080
	High	.248	11	.057	.841	11	**.032**
Residual for Pos2C	Low	.200	10	.200*	.883	10	.141
	High	.190	11	.200*	.915	11	.281
Residual for Pos2L	Low	.238	10	.115	.862	10	.080
	High	.266	11	.028	.878	11	.099
Residual for Pos2G	Low	.307	10	.008	.864	10	.085
	High	.264	11	.031	.878	11	.099
Residual for Pos2M	Low	.196	10	.200*	.875	10	.113
	High	.164	11	.200*	.936	11	.476

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.11.
Tests of Normality in Class B in Phase 1

Tests of Normality for Tests in Class B in Phase 1

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for Pos1T	Low	.269	5	.200*	.831	5	.140
	High	.293	6	.117	.915	6	.473
Residual for Pos1C	Low	.300	5	.161	.883	5	.325
	High	.183	6	.200*	.960	6	.820
Residual for Pos1L	Low	.237	5	.200*	.961	5	.814
	High	.215	6	.200*	.850	6	.158
Residual for Pos1G	Low	.273	5	.200*	.852	5	.201
	High	.293	6	.117	.915	6	.473
Residual for Pos1M	Low	.136	5	.200*	.989	5	.975
	High	.255	6	.200*	.867	6	.215

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table E.12.
Tests of Normality in Class B in Phase 2

Tests of Normality for Tests in Class B in Phase 2

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level		Statistic	df	Sig.	Statistic	df	Sig.
Residual for Pos2T	Low	.349	5	.046	.771	5	**.046**
	High	.167	6	.200*	.982	6	.960
Residual for Pos2C	Low	.231	5	.200*	.881	5	.314
	High	.209	6	.200*	.907	6	.415
Residual for Pos2L	Low	.231	5	.200*	.881	5	.314
	High	.121	6	.200*	.983	6	.964
Residual for Pos2G	Low	.246	5	.200*	.956	5	.777
	High	.237	6	.200*	.927	6	.554
Residual for Pos2M	Low	.302	5	.155	.879	5	.303
	High	.177	6	.200*	.941	6	.664

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction