Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy

Based on Teacher Written Corrective Feedback

Mr. Thanakorn Santanatanon

จุฬาลงกรณ์มหาวิทยาลัย

CHULALONGKORN UNIVERSITY

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Education in Teaching English as a Foreign Language

Department of Curriculum and Instruction

FACULTY OF EDUCATION

Chulalongkorn University

Academic Year 2021

การศึกษาความยึดมั่นผูกพันของนักเรียนต่อการแก้ไขไวยากรณ์ในงานเขียนภาษาอังกฤษตามข้อมูล
ป้อนกลับของครู

นายธนกร สันทนตานนท์

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาครุศาสตรมหาบัณฑิต
สาขาวิชาการสอนภาษาอังกฤษเป็นภาษาต่างประเทศ ภาควิชาหลักสูตรและการสอน
คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2564
ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

Thesis Title	Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback
By	Mr. Thanakorn Santanatanon
Field of Study	Teaching English as a Foreign Language
Thesis Advisor	Associate Professor SUMALEE CHINOKUL, Ph.D.

Accepted by the FACULTY OF EDUCATION, Chulalongkorn University in Partial Fulfillment of the Requirement for the Master of Education

╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌ Dean of the FACULTY OF EDUCATION

(Associate Professor SIRIDEJ SUJIVA, Ph.D.)

THESIS COMMITTEE

╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌ Chairman
(Assistant Professor Maneerat Ekkayokkaya, Ph.D.)

╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌ Thesis Advisor
(Associate Professor SUMALEE CHINOKUL, Ph.D.)

╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌ External Examiner
(Associate Professor PRANNAPHA MODEHIRAN, Ph.D.)

ธนกร สันทนตานนท์ : การศึกษาความยึดมั่นผูกพันของนักเรียนต่อการแก้ไขไวยากรณ์ในงานเขียนภาษาอังกฤษตามข้อมูลป้อนกลับของครู. (Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback) อ.ที่ปรึกษาหลัก : รศ. ดร.สุมาลี ชิโนกุล

ประโยชน์ที่นักเรียนได้จากข้อมูลป้อนกลับเกี่ยวกับหลักไวยากรณ์อาจขึ้นกับความยึดมั่นผูกพันต่อข้อมูลป้อนกลับ ในปัจจุบันการศึกษาเรื่องความยึดมั่นผูกพันต่อข้อมูลป้อนกลับมักศึกษาในรูปแบบการวิจัยเชิงคุณภาพเพียงอย่างเดียว อย่างไรก็ตาม ความสัมพันธ์ระหว่างความยึดมั่นผูกพันต่อข้อมูลป้อนกลับและผลการเรียนรู้จากความยึดมั่นผูกพันยังไม่มีการศึกษา นอกจากนี้การศึกษาความยึดมั่นผูกพันต่อข้อมูลป้อนกลับของนักเรียนระดับมัธยมศึกษาตอนปลายยังไม่เป็นประเด็นที่อยู่ในความสนใจมากนัก ดังนั้นการวิจัยแบบผสมผสานเชิงการทดลองนี้จึงศึกษาเพื่อตรวจสอบความสัมพันธ์ระหว่างความยึดมั่นผูกพันต่อข้อมูลป้อนกลับกับความแม่นยำหลักไวยากรณ์การเขียนภาษาอังกฤษและเพื่อศึกษาว่านักเรียนระดับมัธยมศึกษาตอนปลายมีความยึดมั่นผูกพันกับข้อมูลป้อนกลับอย่างไรในเชิงพฤติกรรม จิตพิสัยและพุทธิพิสัย เครื่องมือสำหรับการวิจัยนี้ คือ ข้อสอบเขียนย่อหน้า และ แบบสอบถามเกี่ยวกับความยึดมั่นผูกพันกับข้อมูลป้อนกลับของกลุ่มตัวอย่างนักเรียนหญิงระดับชั้นมัธยมศึกษาปีที่ 4 จำนวน 26 คน และแบบสัมภาษณ์การสนทนากลุ่มของกลุ่มนักเรียนในกลุ่มตัวอย่างเดียวกันโดยเลือกแบบสุ่ม จำนวน 5 คน ทั้งก่อน ระหว่าง และหลังการทดลองใช้ความยึดมั่นผูกพันกับข้อมูลป้อนกลับของครู ผลการศึกษาไม่พบความสัมพันธ์อย่างมีนัยสำคัญทางสถิติระหว่างความยึดมั่นผูกพันต่อข้อมูลป้อนกลับกับความแม่นยำหลักไวยากรณ์การเขียนภาษาอังกฤษ นอกจากนี้ยังพบว่าผลจากการยึดมั่นผูกพันต่อข้อมูลป้อนกลับส่งผลต่อความแม่นยำหลักไวยากรณ์การเขียนภาษาอังกฤษในแง่บวกและแง่ลบ ในส่วนของลักษณะของความยึดมั่นผูกพันต่อข้อมูลป้อนกลับของนักเรียนกลุ่มตัวอย่างพบว่ามีความซับซ้อนและความยึดมั่นผูกพันเชิงพฤติกรรม จิตพิสัยและพุทธิพิสัยมีความเชื่อมโยงซึ่งกันและกัน

สาขาวิชา   การสอนภาษาอังกฤษเป็นภาษาต่างประเทศ   ลายมือชื่อนิสิต ....

ปีการศึกษา   2564   ลายมือชื่อ อ.ที่ปรึกษาหลัก ....

Thanakorn Santanatanon : Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback. Advisor: Assoc. Prof. SUMALEE CHINOKUL, Ph.D.

Whether students benefit from written corrective feedback may depend on their level of engagement with the feedback. To date, student engagement with written corrective feedback has been investigated qualitatively. However, the association between student engagement with feedback and learning outcomes that result from that engagement has not been examined. Moreover, little attention has been paid to secondary students' engagement with written corrective feedback because most studies have focused on university students. Therefore, this mixed-method experimental study was conducted to discern if there is an association between student engagement with feedback and English writing grammar accuracy and explore how high school students engaged with the feedback behaviorally, affectively, and cognitively. Writing tests and a questionnaire were conducted with 26 tenth graders, and focus group interviews were conducted with five randomly-selected participants before, during, and after the intervention. The results indicated that there was no significant association between the variables. Our results indicate that students' engagement with WCF had both negative and positive effects on their English language writing accuracy. The nature of their engagement with this type of feedback was ultimately found to be complex and linked to the three dimensions of student engagement.

Field of Study:	Teaching English as a Foreign Language	Student's Signature ....
Academic Year:	2021	Advisor's Signature ....

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

CHULALONGKORN UNIVERSITY

LIST OF FIGURES

Chapter 1

Introduction

Background of the study

Writing has been perceived to be more challenging to master than other English skills, especially in the contexts where the English language has been learned and used as a second language or a foreign language because it requires a strong command of linguistic competence and other skills such as critical thinking skills (Dueraman, 2015; Watcharapunyawong & Usaha, 2013). In Thailand, although English is one of the eight compulsory subjects in the Basic Education Core Curriculum B.E. 2551 (A.D. 2008), it has been reported Thai students at secondary levels have had difficulty in English writing effectively like other skills due to their limited linguistic knowledge (Padermprach, 2017). Even university students also have a severe problem in English writing (Boonyarattanasoontorn, 2017). Therefore, it is necessary for English teachers to assist their students in developing their writing skills. One of the strategies employed to help students improve their writing skills is using written corrective feedback to make students pay attention to the linguistic errors in their writing.

Written corrective feedback is generally believed to be a valuable tool for second language writing instruction for second language teachers to deal with students' linguistic errors and help learners improve accuracy in writing. Moreover, the teachers can assess each student's progress while giving written corrective feedback (Lee, 2017a). Although teachers are aware that giving feedback requires much time to respond to every student's text and may have doubts if their students can understand it, giving feedback is still an essential practice for the instruction of second language writing (Ferris & Hedgcock, 2014). Provision of feedback continues to be the main interest of many second language writing teachers and researchers in second language writing because it has a close connection to second language acquisition and involves teaching practice in language teaching (Ellis, 2010). However,

many researchers believe that some of its potentials have not been discovered until the present time (Hyland & Hyland, 2019).

Written corrective feedback has been an issue that researchers have been attempting to examine whether and how it affects second language acquisition and second language writing development in terms of grammatical accuracy in writing for over twenty years. The role of written corrective feedback was the center of attention when Truscott (1996) proposed that it was an ineffective and harmful practice to improve students' writing accuracy. He claimed there were no research findings that supported its benefits students' accuracy improvement in writing. Therefore, he suggested stopping using written corrective feedback until it could be proven that it had its merits. However, Ferris (1999) defended that the claims were based on limited and imprecise research evidence with many shortcomings in research design and analysis. She concluded that there should be further well-designed research to investigate the effectiveness of written corrective feedback. After that, more and more well-planned research has examined many important aspects of written corrective feedback. It covered whether it can assist the second language acquisition of forms and structures for a short time and for a long time (e.g., Ellis et al., 2008; Sheen et al., 2009; Van Beuningen et al., 2012) and whether some types of written corrective feedback can improve second language students' accuracy in writing better than others (e.g., Nicolás-Conesa et al., 2019; Shintani & Ellis, 2015; Van Beuningen et al., 2012). In the context of secondary students, many studies (e.g., Almasi & Tabrizi, 2016; Elfiyanto & Fukazawa, 2021; Kim et al., 2020) have been consistently showing that written corrective feedback can contribute to the improvement in secondary students' accuracy in second language writing. Henceforth, the attention shifted to other factors that affect the effectiveness of written corrective feedback, such as types of written corrective feedback (e.g., Sampson, 2012; Stefanou & Révész, 2015) and learner factors such as learner beliefs (Han, 2017), aptitude (Shintani & Ellis, 2015), and proficiency (Lee, 2008). Other feedback practices such as teacher feedback (Lee, 2008), peer feedback (Wu & Schunn, 2021), and automated feedback (Stevenson & Phakiti, 2014) are also investigated.

Statement of Problem

Although a number of studies on written corrective feedback have shown that written corrective feedback has had an impact on an increase in grammatical accuracy (e.g., Nicolás-Conesa et al., 2019; Van Beuningen et al., 2012), the previous studies have emphasized on the improvement of linguistic accuracy in writing for a revised text and a new piece of writing but neglected how some students in the studies possibly could not get the benefit from written corrective feedback. Bitchener (2017) suggested that other factors that may account for why and how some students either succeed or fail to engage in written corrective feedback to improve students' accuracy should be investigated.

Pawlak (2013) and Hyland and Hyland (2019) pointed out that few researchers have addressed student engagement with written corrective feedback to see students' responses to given written corrective feedback. Ellis (2010) defined the term engagement as "how learners respond to the feedback they receive" (p. 342). He explained that types of feedback, individual factors, and contextual factors mediate students' engagement with written corrective feedback. Students' responses to the written corrective feedback can be interpreted in three dimensions: behavioral engagement, affective engagement, and cognitive engagement. The previous studies on student engagement with written corrective feedback (e.g., Han & Hyland, 2015; Zhang, 2017; Zhang & Hyland, 2018; Zheng & Yu, 2018) have been addressed by exploring what ways and how the students at the university level engaged with written corrective feedback for accuracy in writing in the three perspectives after receiving it from teachers, peers, and computers (e.g., Tian & Zhou, 2020; Zheng & Yu, 2018). However, the previous studies on this issue did not address the question of to what extent student engagement with written corrective feedback was related to accuracy in writing. The findings from the previous studies (Han & Hyland, 2015; Zhang & Hyland, 2018; Zheng & Yu, 2018) showed that students whose engagement with teacher written corrective feedback was high could make much correct revision while the ones with low engagement made fewer corrections to the revised draft. However, they did not show whether the participants were able to write accurately in the new piece of writing, resulting from their engagement with the feedback. The

specific problem is whether the level of student engagement with the feedback can influence an increase in grammatical accuracy in the subsequent writing or not. Therefore, a knowledge gap exists as to the relationship between student engagement with written corrective feedback and an improvement in accuracy in a new piece of writing.

In addition, another problem is that little attention has been paid to investigate how high school students engage with written corrective feedback. Based on the findings from the previous studies, it could be a false assumption to generalize that the engagement of students at high school levels is similar to the one of students at the university levels since how students in both levels may engage the feedback because of their different individual difference factors and contextual factors. As a result, this study also explores how high school students engage with written corrective feedback behaviorally, affectively, and cognitively.

Purpose of the Study

The purposes of this mixed-method experimental design were to examine the association between student engagement with written corrective feedback in the three perspectives and English writing grammatical accuracy as the acquisition of targeted linguistic features, as well as to explore student engagement with teacher written corrective feedback regarding behavioral engagement, affective engagement, and cognitive engagement in relation to high school students' perspectives. A mixed-method experimental design was employed to provide insights about personal experience to the outcomes of the study. This study involved sequentially collecting qualitative data before, during, and after the intervention phase of the study. In the initial qualitative phase of the study, qualitative data were collected to explore students' background information and attitudes towards written corrective feedback before the intervention began. Then during the intervention, qualitative data was collected to explore how high school students engaged with the feedback behaviorally, affectively, and cognitively after they received it to improve grammatical accuracy in their text. After the intervention, qualitative data was collected to help explain the results and examine how they improved their

grammatical accuracy in writing, which resulted from their engagement with the written corrective feedback. Quantitative data were collected to examine the accuracy in writing and the level of high school students' engagement with the feedback in order to examine how the student engagement had a relationship with the grammatical accuracy in writing. The quantitative data was the primary data of the research, while the qualitative data was the secondary one to provide additional information for the quantitative data and to provide more information that addressed a different research question that was not relevant to the primary data.

Research Questions

1. How is student engagement with teacher written corrective feedback related to English writing grammar accuracy in a new piece of writing?

2. How do students engage with teacher written corrective feedback behaviorally, affectively, and cognitively?

Research Objectives

1. To examine how student engagement with teacher written corrective feedback is related to English writing grammar accuracy in a new piece of writing.

2. To investigate how high school students engage with teacher written corrective feedback behaviorally, affectively, and cognitively.

Research Hypothesis

1. The high level of student engagement with written corrective feedback is related to high English writing grammar accuracy in a new piece of writing.

Definitions of terms

1. Student engagement

In this study, student engagement refers to students' responses to the written corrective feedback they receive from the researcher as their writing instructor. The student engagement was operationalized into three following types:

1.1 Behavioral engagement concerned how students edited their errors and what strategies they used for error correction after receiving teacher written corrective feedback. In this study, behavioral engagement was interpreted in three aspects: whether the participants made a correction or not, whether it was correct or incorrect, and what strategies they used to correct errors in their draft.

1.2 Affective engagement concerned how students felt after they received teacher written corrective feedback. For this study, it was interpreted in two aspects: the students' positive and negative emotional reactions such as anxiety, delight, and upset (Mahfoodh, 2017) and their positive and negative attitudes towards teacher written corrective feedback (Han & Hyland, 2015).

1.3 Cognitive engagement concerned how students processed teacher written corrective feedback in order to understand it. It was interpreted in two ways. First, the levels of their processing written corrective feedback from the teacher were divided into three levels of awareness: perception, noticing, and understand according to Schmidt (1990). Perception was being aware of where errors occurred in the text, but did not make students focus on the errors. Noticing referred to being able to detect the difference between the error and the written corrective feedback, but it may not be necessary to comprehend what they detected. Understanding was being able to explain metalinguistic knowledge about the errors, which led to correct them accurately. Another one was the participants' metacognitive and cognitive strategies to help them process the feedback based on the Strategic Self-Regulation Model (Oxford, 2017).

2. Written corrective feedback

Written corrective feedback referred to a written response that identified where errors occurred in a text by a second language student. The written corrective feedback was provided by the researcher. The type of written corrective feedback for the study was indirect written corrective

feedback to locate errors by underlining as well as using error codes as metalinguistic clues to identify the types of errors. Many researchers (e.g., Bitchener & Storch, 2016) have suggested that indirect corrective feedback can make learners engage with the feedback more and more likely result in the acquisition of linguistic features targeted with the feedback than direct corrective feedback. Any changes in a text following direct written corrective feedback may be from simply copying the feedback rather than attempting to produce correct forms.

3. Errors

Errors referred to morphological, syntactic, and lexical forms that were considered different from rules of the standard of the English language. This study adapted error categories and codes from Ferris (2006).

4. English writing

The term "English writing" in this study was English writing at the paragraph level.

5. English writing grammar accuracy

English writing grammar accuracy referred to writing English accurately in eleven categories: word choice, verb tense, verb form, word form, articles, singular-plural, pronouns, run-on sentences, fragment, sentence structure, and subject-verb agreement. The accuracy of the eleven error categories was measured in a new piece of writing and rated with an analytic rubric score for English writing grammar accuracy. The score ranging from 0 to 4 was described based on the scales of knowledge of syntax proposed by Bachman and Palmer (1996). Punctuation, vocabulary use, and spelling were not included because the errors related to these three are non-grammatical errors.

Theoretical Framework

Written corrective feedback has been studied for a few decades. It is discussed in this study concerning student engagement with written corrective feedback in three perspectives: behavioral engagement, affective engagement, and cognitive engagement. It is an important aspect to investigate in what way second language students respond to the feedback and use it to revise their text and learn from it. Student engagement may be a good indicator of success in revision and an improvement in accuracy in writing. However, this topic is still under-researched in second language writing (Hyland & Hyland, 2019).

The theoretical framework of student engagement with written corrective feedback is mentioned here and further described in detail in Chapter 2. The componential framework for investigating corrective feedback proposed by Ellis (2010) indicates that student engagement is mediated with types of corrective feedback, individual differences factors, and contextual factors, as shown in Figure 1.
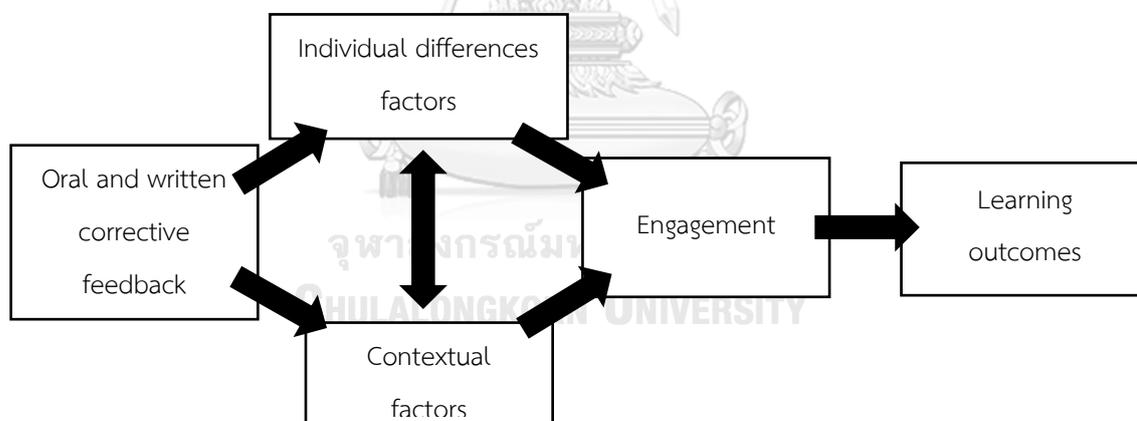
Figure 1: The componential framework for investigating corrective feedback
(Ellis, 2010)

However, this framework did not specifically serve as the basis for investigating written corrective feedback, so Han and Hyland (2015) suggested it is necessary to adjust the componential framework for investigating corrective feedback (Ellis, 2010) in order to make it compatible with examining written corrective

feedback through this framework due to differences of student engagement between with oral and with written corrective feedback. For example, written corrective feedback allows students to have more time to notice the corrective force, consider whether the given feedback is effective or not, and use strategies that help them process the given written corrective feedback to improve the accuracy in their writing while oral corrective feedback has much more pressure on students to correct their errors immediately (Ellis, 2010; Han & Hyland, 2015). As a result, the adapted framework for investigating written corrective feedback based on the componential framework for investigating corrective feedback proposed by Ellis (2010) was proposed for this study, as shown in Figure 2.
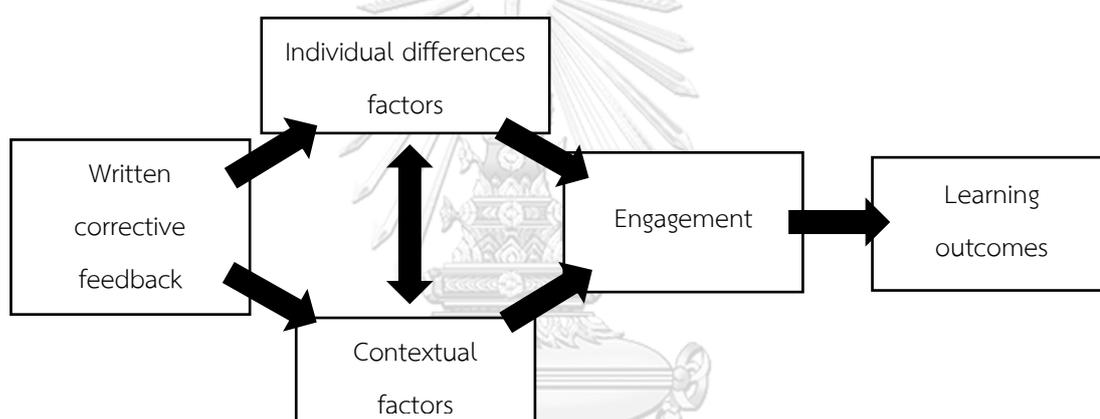
Figure 2: A modified version of the componential framework for investigating written corrective feedback

Student engagement has been found that it can lead to positive outcomes in academic study (Fredricks, 2013). In addition, many studies have shown that student engagement with written corrective feedback can affect second language writing in terms of accuracy (e.g., Han & Hyland, 2015; Zhang & Hyland, 2018). The findings illustrated that some students engaged with the feedback more deeply than others, which led to different outcomes for each student. Ellis (2010) suggested that student engagement can be applied to investigate written corrective feedback.

Scope of the study

The scope of the study aimed to examine the association between the high school students' engagement with written corrective feedback in view of behavioral engagement, affective engagement, and cognitive engagement and English writing grammar accuracy and to explore their engagement with teacher written corrective feedback in all three dimensions. The variables in this study were student engagement with teacher written corrective feedback as an independent variable and students' English writing grammar accuracy in writing as a dependent variable.

An assumption of this study was that student engagement with written corrective feedback could influence English writing grammatical accuracy in a new piece of writing. Students extensively committed to learning from the feedback are more likely to write a new text more accurately. Another assumption was that high school students' engagement with the feedback might differ from university students' engagement with the feedback due to the differences in the contextual factors and individual differences factors.

A delimitation of this study was the study focused on how the participants engaged with the written corrective feedback and whether and to what extent it influenced the grammatical English writing grammar accuracy as a learning outcome. The type of written corrective feedback for the study was indirect written corrective feedback by locating errors by underlining as well as using error codes as metalinguistic clues to identify the types of errors. The written corrective feedback was provided when the students were in the process of editing their text while other kinds of written feedback, such as content-focused feedback, were provided at the other steps of the writing process based on Nation and Macalister (2020). Although the content of the writing was considered in the writing instruction, written feedback for other aspects of writing, such as content and organization, was not emphasized in this study because corrective feedback mainly focuses on linguistic errors rather than errors about content or organization (Bitchener & Storch, 2016).

Another delimitation of this study was that the participants in the study were all female. The participants may not fully represent the norm for all high school students. In addition, the data was a reflection of high school students' engagement

with the feedback. Therefore, findings may not apply to other levels of learners, such as young learners, because factors related to writing instruction as contextual factors are fixed by the Basic Education Core Curriculum B.E. 2551 (A.D. 2008).

A limitation of this study was that the study was conducted during the coronavirus pandemic, so external factors such as stress may affect the participants' engagement with the feedback. In addition, the amount of time for conducting the research was limited. The course the researcher was responsible for was scheduled for every Wednesday. Moreover, there was a school policy that allowed students to take a break from an online class to reduce students' stress from learning online from time to time.

Significance of the study

Grammatical accuracy is one of the important goals for writing instruction (Karim & Nassaji, 2019). For second language writing instruction, written corrective feedback is common practice to deal with students' grammatical errors in their text. It is necessary that teachers must respond to the errors because they are the evidence of the students' problems related to accuracy in writing (Hyland & Hyland, 2019). Thus, written corrective feedback is a crucial element for second language students to effectively learn writing.

Student engagement with the feedback has been a topic that has not been widely researched in second language writing (Hyland & Hyland, 2019; Pawlak, 2013) even though it has now been shown that student engagement with written corrective feedback can influence the success in revision according to the feedback (e.g., Han & Hyland, 2015). Thus, student engagement is the crucial factor in understanding to what extent and they are committed to their learning, more specifically, learning from the written corrective feedback while revising their text.

Second language writing teachers and researchers may benefit from this study on how students' engagement with written corrective feedback is related to English writing grammar accuracy in the new piece of writing. Using this study's results, writing instructors who teach writing at the high school levels may gain insights into how high school students engage with the feedback in three dimensions from the

findings, which is helpful to plan and develop strategies to provide the feedback that is appropriate for the students.

By understanding high school students' engagement with written corrective feedback, writing teachers can better understand how the students respond to the feedback. They may be encouraged to design an approach to teaching writing that can enhance their engagement with the written corrective feedback.

The insights may show a unique perspective of high school students' engagement with written corrective feedback for second language writing researchers. Their perspectives on their engagement with the feedback can suggest other potential factors that have not been found in a university student's engagement with the feedback from the previous studies (e.g., Han & Hyland, 2015; Zheng & Yu, 2018). Moreover, the outcome of the study may shed new light on the relationship between student engagement with teacher written corrective feedback and English writing grammar accuracy in the new piece of writing. It may offer guidance in further investigation into the association between the student engagement with the feedback and English writing grammar accuracy.

Summary

This study sought to understand how high school students engage with written corrective feedback and its association with the English writing grammar accuracy in the new piece of writing. As most previous studies on the student engagement with the feedback focused on in what way students at the university levels engaged with the feedback to improve their text in terms of grammatical accuracy, there is a knowledge gap as to whether and to what extent student engagement with the feedback can influence the English writing grammar accuracy in the new piece of writing. Furthermore, this study also investigated how students at the high school levels engage with written corrective feedback behaviorally, affectively, and cognitively. The results of this study may provide new perspectives to second language writing teachers and researchers.

Chapter 2

Literature Review

This goal of the literature review is to summarize the practice of written corrective feedback in second language writing and student engagement with the feedback in all three dimensions: behavioral engagement, affective engagement, and cognitive engagement. There is also a focused section on each type of student engagement that is relevant to this study. This literature review also includes writing instruction and assessment.

1. Written corrective feedback

1.1 Definition of written corrective feedback

Written corrective feedback is generally defined as a teacher's written response to linguistic errors in a piece of writing made by students (e.g., Bitchener, 2018; Bitchener & Storch, 2016; Li & Roshan, 2019; Mao & Lee, 2020). In the early literature on this topic, some researchers (e.g., Bitchener & Ferris, 2012; Truscott, 1996) referred to it as error correction or grammar correction, so Bitchener and Storch (2016) concluded that written corrective feedback is traditionally perceived as the feedback which focuses on linguistic errors instead more than on content and organization. However, it is possible to respond to vocabulary use, punctuation, and spelling.

1.2 A brief history of written corrective feedback

This section gives a brief overview of the history of written corrective feedback and its issue to elaborate on its importance in second language writing.

During the 1950s to 1960s, second language writing was employed as a writing exercise for language practices of new grammatical forms or vocabulary. Because of the influence of behavioral perspectives on second language teaching, teachers had to avoid errors during the class and taught

students to form a habit that led to producing grammatical sentences. Therefore, the writing activities mainly focused on controlled writing or guided writing which emphasized manipulating fixed grammatical patterns and imitating model texts. For example, students were asked to change certain grammatical forms, such as changing singular nouns into plural nouns in a paragraph. From this viewpoint, error correction was necessary for second language writing (Bitchener & Storch, 2016; Ferris, 2011).

During the 1970s, writing instruction for the first language writing classes in North America shifted the focus of feedback to emphasize on writers and the writing process rather than grammatical forms. Consequently, students were encouraged to write multiple drafts by gathering ideas, drafting, and revising. The importance of accuracy was emphasized at the later stage of writing or editing, which showed that the focus of feedback shifted to the meaning more. Furthermore, it was suggested that students should receive feedback from other sources such as peer feedback to get more real feedback from particular readers so that they could realize the nature of writing. However, when the process approach gained more and more popularity in teaching writing, some researchers expressed doubts about the consequences of paying less attention to accuracy in writing to second language students. However, others also pointed out that second language students tended to make different errors from the ones native language students made, so it was essential to launch some strategies to help second language students find and correct their errors in their writing (Ferris, 2011; Hyland & Hyland, 2019).

Provision of feedback for second language students has interested second language writing researchers and teachers for years. Nevertheless, it started to be considerably investigated during the 1990s when Truscott (1996) claimed that error correction did not benefit second language students to develop second language writing skills. As a result of his arguments, more empirical studies were requested to prove whether error correction was effective or not.

1.3 Issues of written corrective feedback

This section begins by examining the issues made by Truscott (1996), which has attracted the attention of many second language acquisition researchers as well as second language writing researchers in order to provide an overview of his strong arguments that have challenged the role of written corrective feedback.

Written corrective feedback has been a debatable topic for second language acquisition researchers and second language writing teachers as it is still questioned whether written corrective feedback is effective to help students acquire the target language and how it is provided to second language students to develop their writing skills. The doubt about the role of written corrective feedback, or defined as error correction by Truscott (1996), was arisen when he made his strong position with his theoretical and practical arguments that students did not benefit from written corrective feedback in terms of second language writing development.

His first argument was that written corrective feedback ignored the complexity of how second language students acquire a target language. He compared written corrective feedback provision as simply transferring some information that was too simple and too sudden for language acquisition. He further pointed out that it was impossible for students to acquire all linguistic forms and structures of syntax, morphology, and lexis with a single form of error correction because of the differences in acquiring those elements. For example, the syntax was exemplified for his argument that it was illogical for students to learn it individually from written corrective feedback. He proposed that teachers should employ more than one strategy to correct their students' errors.

Another of his arguments was that the practice of written corrective feedback did not follow the natural order of second language grammatical learning. He explained that teachers should give feedback in accordance with students' readiness to acquire a target form or structure. It does not help facilitate the students' language acquisition if the teachers provide written

corrective feedback that does not meet their readiness. He suggested that selecting what errors to correct might be more beneficial than correcting all errors; however, he claimed that both selective feedback and comprehensive feedback were found no differences in terms of their effectiveness based on some studies to which he referred.

Another point was that written corrective feedback tended to be the practice that advocated second language students "pseudo-learning," which Truscott (1996) defined as temporary learning that does not lead to the acquisition of the target language. He continued explaining that the knowledge that students acquired through written corrective feedback was probably helpful in editing their text. However, editing usually relied on intuition or feeling of what is well-formed rather than grammatical rules. Therefore, there was little value to improve students' accuracy in writing with written corrective feedback.

The last point of his argument was practical concern about written corrective feedback for teachers and students. He explained that writing teachers must be aware of the errors in their students' texts and consistently identify the specific types of errors correctly, which is very difficult due to time constraints, especially if there are many students in a writing class. If teachers overlook or misunderstand the errors found in students' texts, error correction quality will be deficient. From students' viewpoint, if students have to deal with a lot of written corrective feedback from teachers, they can lose their interest and motivation because it takes very much time to think and correct their errors if they take it seriously. In addition, it is possible that the students are prone to decrease the complexity of their text so that their writing will not be corrected again.

Based on these arguments, Truscott (1996) concluded that written corrective feedback was "unhelpful and counterproductive" and proposed that it should be discarded. However, Ferris (1999) refuted his arguments and argued that there was very limited and contradictory evidence because many studies cited in his article were not well-designed, so it was too early to

conclude that written corrective feedback was ineffective. She pointed out that it was necessary to conduct further research about it to confirm whether written corrective feedback was effective or not.

After that, more and more researchers have investigated the effectiveness of written corrective feedback in more recent years. It has been consistently confirmed that written corrective feedback has the potential for improving students' accuracy in writing (e.g., Shintani et al., 2014). Moreover, there are a number of second language acquisition models and theories explaining how and why written corrective feedback can help students acquire a language. The relevant theories will be discussed in the subsequent sections.

1.4 Supporting theories and hypotheses for written corrective feedback

This section presents second language acquisition theories and hypotheses which support written corrective feedback that can facilitate second language development in writing.

1.4.1 Skill acquisition theory

In view of language learning, skill acquisition theory assumes that language learning is similar to learn other cognitive and psychomotor skills which can be acquired during the process from declarative knowledge, which involves students being exposed to the knowledge about the skill and controlled practice to a procedural knowledge that the students can automatically apply on their own in real situations (Bitchener & Storch, 2016; Gass et al., 2020).

DeKeyser (2020) explained that there are three stages of which names can be called cognitive, associative, and autonomous or declarative, procedural, and automatic or presentation, practice, and production. Each stage has different characteristics of knowledge and its use. In the beginning, students learn a skill from explicit instruction or observation, which is the declarative knowledge stage. However, they do not have the opportunity to use the learned skill just yet.

Then students start to convert from declarative knowledge to procedural knowledge by practicing the target skill. If they are provided with relevant declarative knowledge to help them practice, the progress from the declarative knowledge stage to the procedural knowledge stage can be complete with examples or exercises. When students gain the procedural knowledge of the skill, they will have a repertoire that is ready to use for the target skill, unlike declarative knowledge. However, their acquired procedural knowledge is not developed enough to perform the target skill with fluency and without any errors. Therefore, it is necessary to practice many times so that the time required to perform the target skill and the frequency of errors are less and less, contributing to the automatic knowledge stage.

From the viewpoint of skill acquisition theory, written corrective feedback can help students transform one stage into the next one. At first, written corrective feedback may often be provided to students when they make errors of a targeted grammatical feature during controlled writing practice. It can play an essential role in assisting students to develop their declarative knowledge to procedural knowledge by drawing students' attention to notice and correct their errors in their subsequent text. After that, students might make fewer errors of the targeted feature in their subsequent texts because of the opportunities to edit their text or write a new meaningful text many times, which results from the automatization of their procedural knowledge. Then, it may not be necessary to provide a lot of written corrective feedback for students, but it can serve as a reminder whenever they make errors.

1.4.2 Information Processing

Adaptive Control of Thought (Anderson, 1980) and Information Processing Model (McLaughlin, 1978, 1980) are the models that acknowledge the conversion of declarative knowledge into procedural

knowledge like Skill Acquisition Theory. Anderson (1980) explained that declarative knowledge forms the basis for procedural knowledge and points out second language students rely on declarative knowledge rather than procedural knowledge like native speakers do. However, non-native students may be able to use a second language automatically.

McLaughlin (1978, 1980) stated that second language students process information as input to a limited degree because of the complexity of communicative activities or tasks and their ability to process the information. They can selectively pay attention to particular information and focus on other points later if they cannot process every information all at once. He explained that students require to control their active attention to particular input during the "controlled process" (McLaughlin, 1978) of declarative knowledge to have fewer difficulties processing all information in their working memory. He noted that practicing many times can automatize controlled processing because students restructure their linguistic elements by making them into chunks that are ready to be used automatically. What has been automatized through practice transfers to their long-term memory, allowing students to process without much attention, so they have more capacity to process more complex or new input.

In accordance with McLaughlin (1978), McLaughlin (1990) mentioned how automaticity and restructuring could play an important role in second language learning. Automaticity means control over one's language proficiency. That is, people need to use several skills to do a language performance. If they automatize their skills through practice or repetition, it will be easier for them to use the skills in the future automatically. Restructuring refers to the changes of one's existing second language system due to new learning. It requires learning that causes changes from one's current

linguistic knowledge to a new one that is more efficient than the current language system. During practice, restructuring may occur if students learn a new linguistic element which results in destabilization of their current second language system (Gass et al., 2020).

Based on the Information Processing Model, it is clear that the role of written corrective feedback benefits students during controlled writing practice. Written corrective feedback can serve as an explicit instruction to help students automatize their declarative knowledge and restructure their linguistic knowledge to make them write more accurately.

1.4.3 Noticing Hypothesis

Initially, Noticing Hypothesis by Schmidt (1990, p. 149) that students had to be conscious to learn something. Later, however, Schmidt (1994) made a new version of Noticing Hypothesis by modifying his claim that students with more attention to something can learn more than those with less attention. He explained that consciousness is necessary for noticing to consciously compare students' products with provided accurate inputs so that they can identify the gaps between them, which is a process called notice-the-gap. What is found as a gap will become intake and will be processed to the long-term memory.

Schmidt (1990) distinguished consciousness into three senses. First of all, consciousness as awareness is assumed that consciousness and awareness are similar because both require noticing, which refers to conscious attention to linguistic input that will be stored in the long-term memory later (Schmidt, 1994, p. 179). There are three levels of awareness: perception, noticing, and understanding. First, perception refers to what people are aware of but do not necessarily focus on it. It does not involve consciousness while noticing requires it. Next, noticing is "private experience" (Schmidt, 1994, p. 132). It involves subjectively attending to input which leads to learning. Last, understanding is a high

level of awareness when people can comprehend what is noticed, analyze it, and compare it to what has been noticed at some other time. Schmidt (2010) exemplified every kind of metalinguistic awareness as an example categorized as this level of awareness. He also proposed that understanding can facilitate second language acquisition, but it is optional.

Second, consciousness as intention is distinguished between incidental learning and intentional learning (Schmidt, 1990). Incidental learning occurs when students unintentionally learn what they have not intended to focus on learning at the beginning, which is often effective, whereas intentional learning happens when they deliberately focus on what they want to learn, which is beneficial when students learn something new (Schmidt, 1990).

Third, consciousness as knowledge is generally assumed that having knowledge of something means having consciousness about it (White, 1982 cited in Schmidt, 1990). Knowledge based on this sense of the consciousness can be broadly divided into implicit knowledge and explicit knowledge (Schmidt, 2010). Implicit knowledge is acquired when students are not aware that they are learning something. They are not aware of it unless implicit knowledge is applied in authentic communication. Nevertheless, explicit knowledge is acquired if they are consciously attending to input. Students are conscious of what they know. For example, grammatical rules taught in language classrooms are explicit knowledge when second language students learn them and practice consciously. In contrast, high-proficiency second language students have a subconscious understanding of native-like linguistic knowledge, which is implicit knowledge evident during communication.

In conclusion, according to the Noticing Hypothesis, written corrective feedback can be a tool that raises students' awareness to notice and attend to their errors with the provided feedback as input.

1.4.4 Stages of cognitive processing stages of written corrective feedback

Bitchener (2019) proposed the framework to explain the cognitive processing stages which can cause accurate output if students follow the stages as shown in Figure 3.
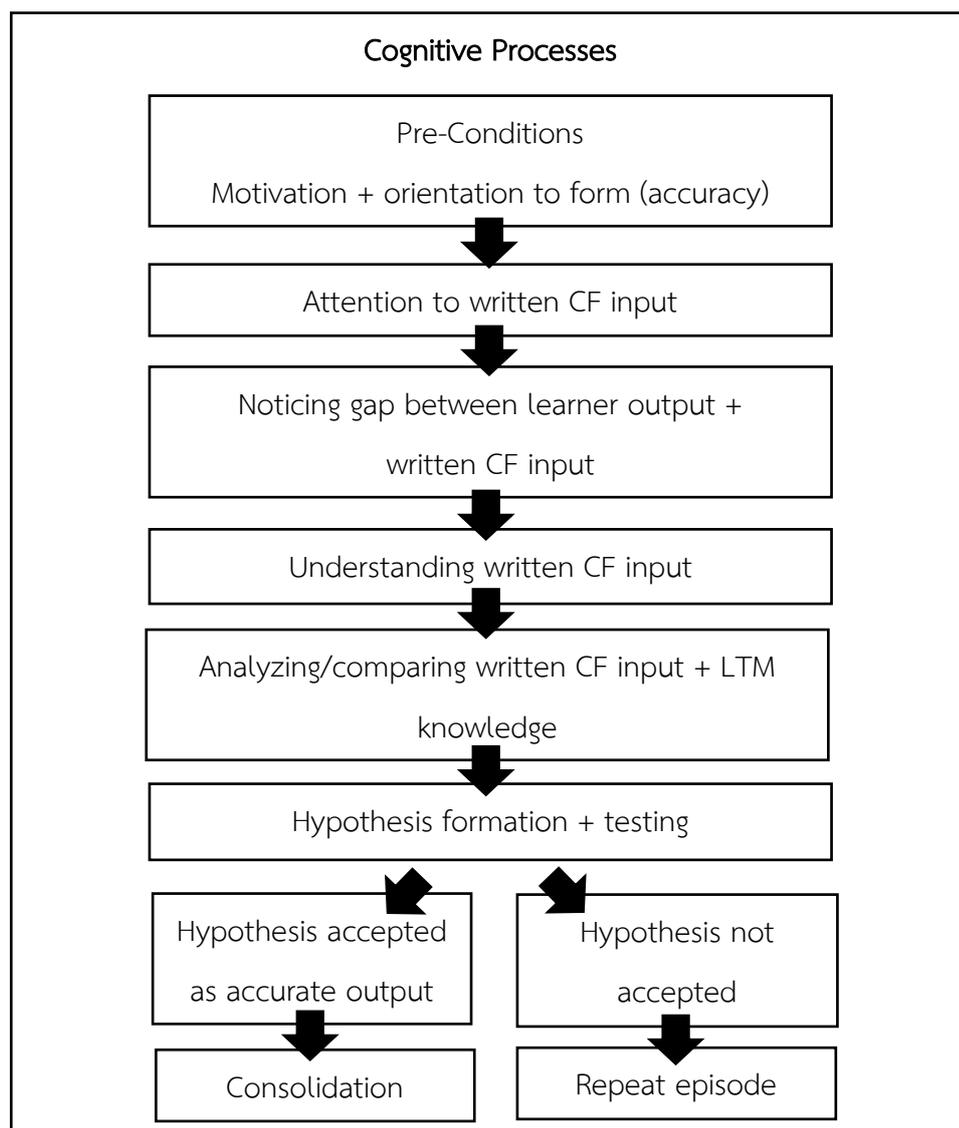
```
┌─────────────────────────────────────────────────────────┐
│                  Cognitive Processes                     │
│   ┌───────────────────────────────────────────────┐     │
│   │              Pre-Conditions                    │     │
│   │   Motivation + orientation to form (accuracy)  │     │
│   └───────────────────────────────────────────────┘     │
│                        ▼                                 │
│   ┌───────────────────────────────────────────────┐     │
│   │           Attention to written CF input        │     │
│   └───────────────────────────────────────────────┘     │
│                        ▼                                 │
│   ┌───────────────────────────────────────────────┐     │
│   │     Noticing gap between learner output +      │     │
│   │              written CF input                  │     │
│   └───────────────────────────────────────────────┘     │
│                        ▼                                 │
│   ┌───────────────────────────────────────────────┐     │
│   │        Understanding written CF input          │     │
│   └───────────────────────────────────────────────┘     │
│                        ▼                                 │
│   ┌───────────────────────────────────────────────┐     │
│   │   Analyzing/comparing written CF input + LTM   │     │
│   │                 knowledge                      │     │
│   └───────────────────────────────────────────────┘     │
│                        ▼                                 │
│   ┌───────────────────────────────────────────────┐     │
│   │         Hypothesis formation + testing         │     │
│   └───────────────────────────────────────────────┘     │
│             ▼                      ▼                      │
│   ┌──────────────────┐   ┌──────────────────┐            │
│   │ Hypothesis accepted│  │  Hypothesis not │            │
│   │ as accurate output │  │    accepted     │            │
│   └──────────────────┘   └──────────────────┘            │
│             ▼                      ▼                      │
│   ┌──────────────────┐   ┌──────────────────┐            │
│   │   Consolidation  │   │  Repeat episode  │            │
│   └──────────────────┘   └──────────────────┘            │
└─────────────────────────────────────────────────────────┘
```

Figure 3: Cognitive-processing stages for a single written corrective feedback episode

Bitchener (2019)

Figure 3 showed that it is necessary students must be motivated to learn from written corrective feedback and focus on accuracy. Then, students pay attention to the written corrective feedback as an input to notice the gap between their output and the provided input with understanding. It is necessary to retrieve knowledge from long-term memory while analyzing or comparing written corrective feedback to produce a modified output to be tested later. During these stages, students should maintain their motivation. If they can make an accurate output after following the stages, the consolidation stages occur.

When students begin to write a new text, Bitchener (2019) proposed that there are stages required when they have to retrieve their knowledge acquired from a previous episode of written corrective feedback, as shown in Figure 4.

According to Figure 4, Bitchener (2019) explained that the preconditions from the Figure 3 seem necessary for students to access their new knowledge to write new texts. During writing a new text, students will focus on meaning to convey information in their text. However, he suggested that if they also focus on the accuracy of the text while focusing on its meaning at the same time, they tend to be aware of the relationship between form and meaning of the text. When they recognize it, it is possible that they will access and retrieve their new knowledge from a previous written corrective feedback episode to produce an output as a hypothesis to demonstrate how students use their knowledge required in the particular linguistic environment. After finishing writing the text, students will assume that their output is accurate until there is a reader of the text to confirm whether it is accurate or not.

To sum up, these supporting theories and hypotheses in second language acquisition reflect how written corrective feedback benefits the development of students' writing in terms of accuracy.

Providing written corrective feedback for students helps them notice the errors in their text and correct their text as practice. Repeating correction, which encourages them to practice correcting errors, is necessary if they still make the same errors in the same text and the new text.
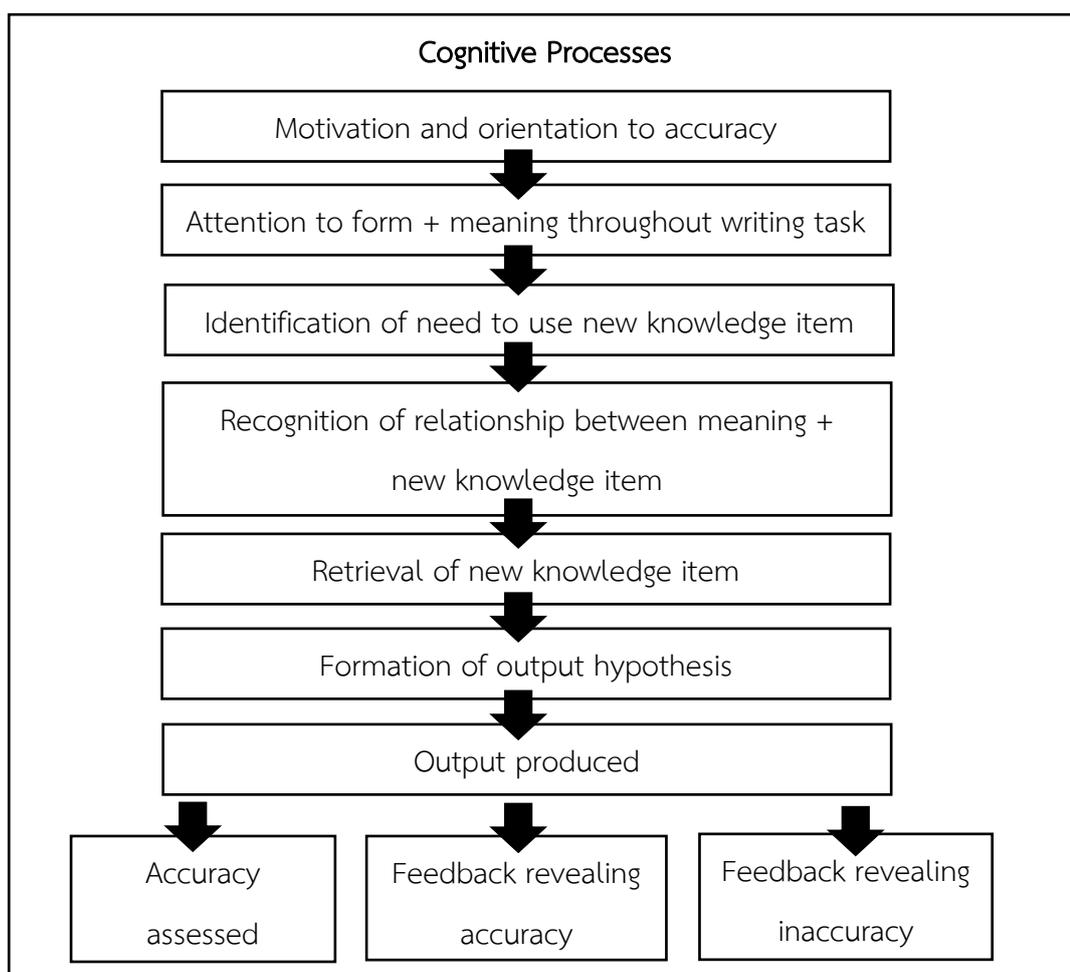
Figure 4: Consolidation processing stages for accessing and using new knowledge

(Bitchener, 2019)

1.5 Types of written corrective feedback

This section begins by presenting common types of written corrective feedback and their advantages and disadvantages.

Written corrective feedback is generally classified into two types: direct corrective feedback and indirect corrective feedback (Bitchener & Ferris, 2012; Ellis, 2010; Ferris, 2011; Lee, 2017a; Pawlak, 2013).

Direct corrective feedback is a type of written corrective feedback which is provided with correct forms nearby errors. It is possible to mark some symbols such as circles and underlines where the errors occur in the text. Inserting the missing words and crossing out unnecessary words are also the options for providing direct written corrective feedback. Its explicitness is such an advantage that it may help a student avoid or lessen confusion about the given feedback, which is suitable for students who cannot edit their texts on their own. However, it may not help students in the long run because it is possible that students merely copy the corrections provided by teachers and do not reflect the feedback as much as they should during the correction. (Bitchener & Ferris, 2012; Bitchener & Storch, 2016; Lee, 2017a).

Indirect corrective feedback involves indicating errors in students' texts but not providing the correct forms. Circling, highlighting, or underlining errors or providing a total number of errors of each line on the margin are examples of indirect written corrective feedback provision (Bitchener & Ferris, 2012; Bitchener & Storch, 2016; Lee, 2017a). Without correct forms provided by teachers, students are responsible for correction on their own, which benefits students while engaging the feedback as activities for "guided learning and problem-solving" to correct their errors (Lalande, 1982, p. 143). Bitchener and Storch (2016) pointed out that indirect corrective feedback can improve students' accuracy and eventually lead to language acquisition since they process the given feedback and attempt to produce accurate forms or structures.

On the other hand, Ellis (2009) and Bitchener and Storch (2016) also mentioned metalinguistic corrective feedback as another type of written corrective feedback. It provides grammatical rules with or without examples relevant to the errors. Each type of error is assigned a number, and its explanation is provided at the bottom of the text. Another option to provide

this type of written corrective feedback is using labels for each category of errors as metalinguistic clues with or without locating the errors. Metalinguistic corrective feedback is helpful when errors are knowledge that students have not acquired before or partially acquired. However, Bitchener and Ferris (2012) and Lee (2017a) included metalinguistic corrective feedback, especially grammatical explanation, as direct corrective feedback, while error codes are included as indirect corrective feedback because the former explains what the result of errors is and how they should be corrected. The latter serves as a hint for errors which requires students to discover how to self-correct the errors in their texts. Lee (2017a) summarizes the written corrective feedback strategies for direct and indirect feedback as shown in Table 1.

Example	Locate error directly	Provide correct answer	Provide metalinguistic clue (error code) / explanation
Direct written corrective feedback			
(A) Yesterday I ~~was~~ went to church.	√	√	×
to (B) Yesterday I went church. ^	√	√	×
went (C) Yesterday I <u>go</u> to church.	√	√	×
went (D) Yesterday I <u>go</u> to church. Explanation You should use the simple past tense here because you are describing a past event.	√	√	√ (metalinguistic explanation)

Table 1: Written Corrective Feedback Strategies (Lee, 2017a)

Example	Locate error directly	Provide correct answer	Provide metalinguistic clue (error code) / explanation
Indirect written corrective feedback			
(E) Yesterday I <u>go</u> to church.	√	×	×
V (F) Yesterday I <u>go</u> to church.	√	×	√ (metalinguistic clues)
(1) (G) Yesterday I <u>go</u> to church. (1) You should use the simple past tense here because you are describing a past event.	√	×	√ (metalinguistic explanation)
(H) Yesterday I go to church. * (An asterisk in the margin means that there is one error in that line.)	×	×	×
(I) Yesterday I go for church. 2 (2 = two errors in that line)	×	×	×
(J) Yesterday I go to church. V (V = one "verb" error in that line)	×	×	√ (metalinguistic clues)

Table 1: Written Corrective Feedback Strategies (Lee, 2017a) (Continue)

The written corrective feedback has been proven to improve the accuracy in writing by many researchers (e.g., Shintani et al., 2014; Van Beuningen et al., 2012). Although some researchers (Fazio, 2001; Robb et al., 1986) found it ineffective in enhancing writing accuracy, their findings were not convincing because there was not a control group that did not receive the written corrective feedback to compare with the student groups receiving the feedback. It was not clear whether their results were because of the

feedback or other factors. Therefore, based on the studies that include the control group (e.g., Shintani et al., 2014), it may be concluded that written corrective feedback can lead to an improvement in accuracy in writing.

In view of the effectiveness of the different types of written corrective feedback by comparing direct written corrective feedback and an indirect one, some previous studies found that direct feedback was more effective than the other one (Mirzaii & Aliabadi, 2013; Shintani et al., 2014; Van Beuningen et al., 2008) while the others found that they were not significantly different (Suzuki et al., 2019; Van Beuningen et al., 2012). With these previous studies, it is unclear which type of written corrective feedback can affect the development of accuracy in writing more than the other one.

Although it has not been confirmed whether some types of written corrective feedback are more effective than others, several studies have reported that written direct corrective feedback is more effective and more helpful for low-proficiency students who cannot edit on their own (Ellis et al., 2008; Shintani et al., 2014). However, indirect written corrective feedback has been found helpful by many researchers (Ferris, 2006, 2011; Lalande, 1982) because it allows students to reflect their linguistic knowledge according to the given feedback and attempt to self-edit, which can improve their self-editing ability as an independent writer (Ferris et al., 2013).

In order to decide what type of written corrective feedback to provide in the study, since the study focused on cognitive engagement as one of the three kinds of student engagement with written corrective feedback, indirect written corrective feedback was used to provide the feedback on accuracy in writing due to the fact that it requires more cognitive engagement than direct corrective feedback (Ellis, 2010), and students themselves have to correct the errors marked by a teacher even though the teacher locates where the errors are. According to Table 1, the strategy of the indirect feedback provision for the study was based on Example F. Although the indirect written corrective feedback like Example E, H, and I appear to be more demanding for students to process the feedback deeply than the one from Example F, Kim and

Bowles (2019) reported that when their participants received their implicit written corrective feedback as reformulation, they did not notice as many errors as they received direct written corrective feedback, so it can be assumed that providing students with too implicit written corrective feedback may not be able to help them notice and understand the input.

1.6 A quantity of written corrective feedback provision

This section begins by examining the definition of focused, unfocused, and comprehensive written corrective feedback as a scope for the written corrective feedback provision and its effectiveness based on previous studies.

The amount for written corrective feedback should be considered when second language writing teachers will give students feedback. Generally, focused written corrective feedback and unfocused written corrective feedback are the two approaches that are concerned with how many error categories teachers should respond to their students' writing task (Bitchener & Ferris, 2012; Bitchener & Storch, 2016; Ferris, 2011). The former deals with one error category at one time, while the latter covers every type of error in a student's text. Commonly, writing teachers tend to mark and correct all errors in the student's text, which is unfocused or comprehensive written corrective feedback (Bonilla López et al., 2018; Lee, 2013).

However, the definition of "focused," "unfocused," and "comprehensive" written corrective feedback has not been clear since some previous studies (e.g., Ellis et al., 2008) described "focused" written corrective feedback as focusing on only one type of errors while the others (e.g., Ferris, 2010) defined it as focusing on several types of errors but not all types of errors like unfocused or comprehensive written corrective feedback. Similarly, it is generally understood that comprehensive written corrective feedback and unfocused written corrective feedback are alike (e.g., Van Beuningen et al., 2012). However, some previous studies (e.g., Sheen et al., 2009) defined the latter as focusing on several types of errors around four or six error types. Therefore, Liu and Brown (2015) proposed that the scope for the amount for

written corrective feedback can be comprehensive, mid-focused, and highly-focused, and Lee (2017b) presented a diagram that shows a continuum of comprehensive-focused written corrective feedback as shown in Figure 5. According to Figure 5, Lee (2017b) explained that at the left end of the continuum refers to comprehensive or highly unfocused written corrective feedback that is concerned with all error categories while at the other side of the continuum is focused on written corrective feedback, which selectively corrects one particular error category. In the middle of both sides, it is mid-focused written corrective feedback, which covers some error categories, but not all like comprehensive written corrective feedback. The more error types to focus are, the less focused the written corrective feedback becomes.

Comprehensive /	A number of error categories	Highly selective/
All errors		Only one error category
Highly unfocused	Mid-focused	Highly focused
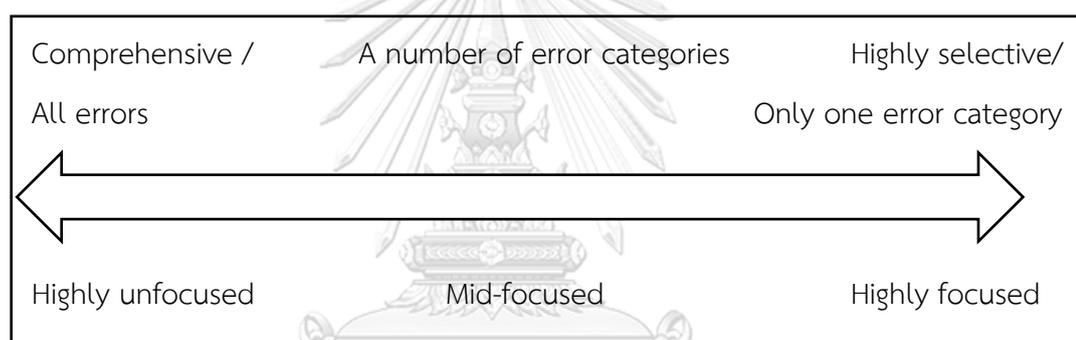
Figure 5: Comprehensive-focused written corrective feedback continuum
(Lee, 2017b)

Based on the studies on the effectiveness of focused and unfocused written corrective feedback, the focused feedback (Bitchener & Knoch, 2010; Shintani et al., 2014) and the unfocused feedback (Van Beuningen et al., 2008, 2012) are found effective. However, the differences in the effectiveness of both focused and unfocused feedback cannot lead to a firm conclusion on which one is more effective (Bitchener & Storch, 2016; Lee, 2017b; Mao & Lee, 2020). For example, Sheen et al. (2009) found that focused written corrective feedback was more effective than unfocused written corrective feedback, while Ellis et al. (2008) found that both are equally effective and student groups who receive either focused or unfocused written corrective feedback

have significantly greater accuracy in writing than the control group. The two groups receiving the different feedback were not different in accuracy in writing. Frear and Chiu (2015) also found that the groups with focused and unfocused written corrective feedback could lead to higher accuracy in writing than the control group. However, the performance of both written corrective feedback groups was not significantly different. With the mixed results from the previous studies, it may be difficult to determine which one is more effective.

Although teachers usually provide them with comprehensive written corrective feedback in the writing classroom, they can be at a disadvantage if they cannot respond to all errors in students' text. However, it may not be practical if writing teachers always focus on one or two error categories in students' text. Lee (2017b) suggested that writing teachers can combine focused and unfocused written corrective feedback to respond to students' writing. For example, comprehensive written corrective feedback is used to diagnose students' accuracy in writing and track their progress, and focused written corrective feedback is used for writing assignments. However, unfocused written corrective feedback was employed for the study because it could reflect the accuracy in writing more than focusing a few error categories (Ferris, 2011).

1.7 A timing for written corrective feedback provision

This section presents views of the timing for written corrective feedback provision and some strategies to provide the feedback at different times.

There has been a discussion of written corrective feedback about when it is appropriate to provide it in a process-oriented writing approach. Generally, writing teachers who implement the process writing approach as their instruction do not support providing written corrective feedback very early when students are still revising and reviewing the ideas for their writing for many important reasons (Bitchener & Ferris, 2012; Ferris, 2011). First, it will

waste time providing written corrective feedback very early if students are still making changes in their draft. The feedback is not helpful if the text which has had the marking on the errors is deleted or rearranged. Second, it can distract students' attention to focus on developing a text. Third, students can have a wrong idea about the writing. Receiving written corrective feedback in early drafts can make students perceive writing as a perfect final draft rather than a process that helps them develop ideas for their writing. Based on these reasons, giving students written corrective feedback is crucial at the last stage of the writing process.

However, other researchers suggest that receiving feedback on content and errors at the same time can benefit students to improve their writing. Ashwell (2000) found that the group of second language students who received both content-focused feedback and written corrective feedback simultaneously could successfully revise and edit their text like the group of students who received content-focused feedback and written corrective feedback later and vice versa the other group. Montgomery and Baker (2007) also found that most students' perception of teacher feedback in their study agreed that it is great to receive much feedback from teachers. Therefore, the two studies show that students want and value no matter what type of feedback.

Although there has not been a final conclusion on what timing of written corrective feedback should fit in the writing process, many researchers (e.g., Bitchener & Ferris, 2012; Ferris, 2011) suggested that writing teachers can give broad feedback on errors with feedback on ideas or organization for their initial draft. Then, written corrective feedback provision can be more dominant in subsequent drafts.

In conclusion, despite the controversy about the timing to provide written corrective feedback, it is an important aspect to consider when to provide it in order to benefit students as much as possible. In this study, written corrective feedback will be only provided at the final stage of the writing process so that the participants can concentrate on editing errors

more than paying attention to both revising ideas and editing errors at the same time.

2. Student engagement with written corrective feedback

2.1 Definition of student engagement with written corrective feedback

Ellis (2010) defined student engagement with corrective feedback as a student's commitment and responses to the corrective feedback. However, the definition primarily covered both oral and written corrective feedback. Therefore, the definition of student engagement with written corrective feedback can be defined as how they respond to written corrective feedback. It can be divided into three perspectives which are behavioral engagement, affective engagement, and cognitive engagement. The framework for investigating student engagement with corrective feedback will be presented in the subsequent section.

2.2 The framework for investigating student engagement with written corrective feedback

The framework for investigating student engagement with written corrective feedback was based on the componential framework for investigating corrective feedback (Ellis, 2010, p. 337) (see Figure 1). Although he claimed that "the framework is intended not so much as a theory of corrective feedback but as a heuristic that can inform research (Ellis, 2010, p. 337)," it shows essential factors including types of the corrective feedback, individual differences factors, and contextual factors, which affect student engagement with the feedback.

According to the framework in Figure 1, students' engagement is mediated by types of corrective feedback, individual differences factors, and contextual factors. First, according to Ellis (2010), types of corrective feedback were divided into two categories: oral corrective feedback and written corrective feedback. The oral corrective feedback can be classified into input-providing corrective feedback such as recasts and output-pushed corrective

feedback like clarification requests. The former will be provided by reformulating students' inaccurate sentences, while the latter will be done by making students modify their output. The written corrective feedback can be either direct written corrective feedback or an indirect one. Direct written corrective feedback involves providing correction and marking where errors occur. It is possible to provide a grammatical explanation with some examples. On the other hand, indirect written corrective feedback is provided by locating errors or indicating how many errors each line has.

Second, according to Ellis (2010), individual differences factors consist of many factors such as age, language aptitude, and learner belief. Contextual factors are divided into macro factors and micro factors. The macro factor is the context where language learners learn a foreign language, such as second language settings, foreign language settings, and immersion settings. In contrast, the micro factor relates to the activity or the context where language learners receive written corrective feedback such as English writing instruction and activities in the classroom.

Third, Ellis (2010) explained that student engagement can be interpreted as behavioral engagement, affective engagement, and cognitive engagement. Behavioral engagement is concerned with whether and what strategies students attempt to correct the errors in their text according to corrective feedback provided. Affective engagement refers to students' attitudes and emotions towards corrective feedback, and cognitive engagement deals with how students pay attention to corrective feedback to understand it.

Finally, learning outcomes is the development of students because of the impact of the corrective feedback. Ellis (2010) mentioned learning outcomes in view of language acquisition which can be interpreted in different ways, such as acquiring totally new linguistic features, gaining accuracy of some acquired linguistic features, and progressing in the acquisition of linguistic features. He pointed out the four types of language

assessment: free constructed responses, constrained-constructed responses, selected responses, and metalinguistic judgments (Norris & Ortega, 2000).

Many studies have found that student engagement is mediated by the factors that Ellis (2010) mentioned. In view of the influence of individual learner factors and contextual factors on student engagement with written corrective feedback, Han (2019) studied what and how individual differences factors and contextual factors influenced two participants' student engagement with written corrective feedback. He found that the learner factors such as language abilities, metalinguistic knowledge, prior knowledge regarding the coded corrective feedback, and the contextual factors related to the writing instruction and sociocultural factors enhanced and hindered their student engagement with the feedback. They reported that they could engage more deeply when the contexts where they received the feedback were appropriate for them. When the feedback was not suitable for them and the contexts which did not facilitate them engage with the written corrective feedback, they failed to understand and correct the errors.

From the perspective of how types of written corrective feedback impact student engagement, Uscinski (2017) investigated how second language first-year university students engaged with direct written corrective feedback via Track Changes, handwritten feedback, and comments. The findings of the study showed that students engaged with the feedback at a very low level, and they were not aware of why the correction was made. This study suggested that direct written corrective feedback did not increase student engagement much although the students made corrections according to the feedback. In a more recent study, La Russa (2021) compared the effects of student engagement between direct feedback and indirect feedback on text revision. She found that although direct and indirect feedback could help students make a better revision, the student group that received the indirect written corrective feedback engaged extensively more than the other group and the control group. The findings showed that indirect feedback enhanced student engagement with the feedback, especially in

cognitive engagement, which is in line with Ellis (2010) who suggested that indirect written corrective feedback requires more cognitive engagement than the direct corrective feedback. However, as Uscinski (2017) mentioned, he pointed out that having more engagement does not guarantee that students can improve their accuracy in writing. Despite this, it is evident that indirect corrective feedback can enhance student engagement with the feedback. According to these studies, it is clear that types of feedback, individual differences factors, and contextual factors affect how second language students engage with the feedback.

Details in each type of student engagement with written corrective feedback will be discussed in the next section.

2.3 Types of student engagement with written corrective feedback

This section describes each type of student engagement with written corrective feedback and examines their sub-constructs based on the previous studies.

2.3.1 Behavioral engagement with written corrective feedback

The behavioral engagement in view of written corrective feedback concerns whether and how students make a revision of their text in response to feedback (Ellis, 2010; Han & Hyland, 2015; Zhang & Hyland, 2018). It has been investigated to explore how students handle the feedback (Ellis, 2010; Ferris et al., 2013; Hyland, 2003). For instance, Hyland (2003) examined the relationship between teacher feedback and students' revision to their draft by comparing their first draft and revised draft and found that most students succeeded in revising their text. Ferris et al. (2013) investigated what strategies the students as self-editors used to edit their text in response to written corrective feedback. What was discovered in these studies indicates the students' behavioral engagement with written corrective feedback.

It is important to examine if they are able to edit their writing or avoid corrections and how they make corrections, which can lead to the development of their accuracy in writing. Based on the study

by Han and Hyland (2015), they proposed the two sub-constructs of behavioral engagement with written corrective feedback are how students correct the errors in their writing according to written corrective feedback from teachers and what observable strategies they use to understand it and improve their writing.

How students make a revision to improve grammatical accuracy in their text can be examined based on student revision analysis categories (Ferris, 2006), as shown in Table 2.

Label	Description
Error corrected	Error corrected per teacher's marking.
Incorrect change	Change was made but incorrect.
No change	No response to the correction was apparent.
Deleted text	Student deleted marked text rather than attempting correction.
Substitution, correct	Student invented a correction that was not suggested by teacher's marking.
Substitution, incorrect	Student incorrectly made a change that was not suggested by teacher's marking
Teacher-induced error	Incomplete or misleading teacher marking caused student error.
Averted erroneous teacher marking	Student corrected error despite incomplete or erroneous teacher marking.

Table 2: Student revision analysis categories (Ferris, 2006)

Table 2 presents every type of students' revision strategies to correct their writing, which relates to student's behavioral engagement with written corrective feedback. It shows whether they attempt to make corrections to their writing, how they correct their text and whether it is successful or not.

As for students' strategies to revise their text, they may have different strategies to help them make a revision. For instance, Han and Hyland (2015) reported that one of their participants who engaged with the written corrective feedback deeply attended optional the teacher-student writing conferencing to seek clarification of the written corrective feedback and consulted an online dictionary for revision. Another participant asked help from his friend to figure out how to correct the errors for him, which was clear that he intended not to engage with the feedback. Obviously, this participant had a low level of student engagement with the feedback. Similarly, Zheng and Yu (2018) reported observable strategies similar to the findings from Han and Hyland (2015). However, some of their participants edited the errors based on what seemed appropriate in their first language.

In conclusion, behavioral engagement with written corrective feedback is interpreted according to the student revision analysis categories (Ferris, 2006). However, teacher-induced error and averted erroneous teacher marking were not included in this study because they did not reflect the result of the engagement from the students but teacher's failure. Observable strategies for correcting errors such as consulting with the teacher in a writing conference (Han & Hyland, 2015) are also included as the behavioral engagement.

2.3.2 Affective engagement with written corrective feedback

Affective engagement with written corrective feedback is students' emotional responses and attitudes towards teacher written corrective feedback during editing their writing (Ellis, 2010; Han & Hyland, 2015; Zhang & Hyland, 2018). As soon as students receive written corrective feedback, their emotional responses can play an important role in influencing students to accept or reject it. Fredrickson (2013) noted that negative emotions make students pay

less attention and less active, while positive emotions encourage them to concentrate and participate more. Therefore, affective engagement is very important for students to decide whether they should attempt corrections.

The sub-constructs of affective engagement are emotions and attitudes (Han & Hyland, 2015). Emotions can be positive and negative emotions such as pleasure, satisfaction, upset, anxiety, disappointment during revision (Mahfoodh, 2017). According to Mahfoodh (2017), different types of written feedback caused various emotional reactions to them. For instance, feeling acceptance of feedback, rejection of feedback, surprise, and dissatisfaction was found when the students received direct coded, whereas negative evaluation made them feel disappointed and frustrated. Attitudes towards written corrective feedback can be positive, neutral, and negative (Han & Hyland, 2015).

Several studies have found that affective engagement with written corrective feedback plays a vital role because emotions and attitudes can influence students' attention and utilization of written corrective feedback. Several studies have found that students with positive emotions were successful in revision while those with negative emotions failed to revise the grammatical errors. For example, Han and Hyland (2015) reported that one of their participants felt so overwhelmed that she was not able to concentrate on revising her writing and was always worried although she had been very confident before. This situation made her scared to edit the draft later. Another participant in the study could change her negative emotions into motivation and felt that she needed to improve herself. Consequently, she was able to correct most of the errors according to the feedback. Zhang and Hyland (2018) found that one of their students was very motivated to make a better piece of writing after receiving teacher feedback. She revised her draft by rewriting and rearranging some

sentences and paragraphs and using many strategies such as consulting an online dictionary and checking her essay with her friends.

As for student's attitudes towards written corrective feedback, Han and Hyland (2015) found three participants had similar views that content was more important than linguistic accuracy in writing, and one of them had a negative attitude and doubt about its effectiveness, but they still had a positive attitude and believed that written corrective feedback could improve her writing. Despite being in favor of content, most of them were successful in correcting the errors.

In summary, affective engagement with teacher written corrective feedback is interpreted as positive and negative emotional reactions (Mahfoodh, 2017) and attitudes towards with the feedback (Han & Hyland, 2015).

2.3.3 Cognitive engagement with written corrective feedback

Cognitive engagement with written corrective feedback is students' investment and cognitive strategies to process teacher written corrective feedback (Ellis, 2010; Han & Hyland, 2015; Zhang & Hyland, 2018). Students should cognitively engage with written corrective feedback; otherwise, they may not get its benefits and eventually fail to make a revision. Therefore, it is necessary that students use various cognitive and metacognitive strategies to understand written corrective feedback.

Han and Hyland (2015) proposed the three sub-constructs: levels of awareness, cognitive strategies, and metacognitive strategies, for investigating cognitive engagement. Levels of awareness can be categorized into perception, noticing, and understanding based on Noticing Hypothesis (Schmidt, 1990). The different levels of awareness can result in different use of written corrective feedback. As for metacognitive strategies and cognitive strategies, according to the Strategic Self-Regulation (S^2R) Model (Oxford, 2017), students can use

metacognitive strategies such as planning and evaluating to regulate their learning and cognitive strategies such as memorizing and reasoning to help them processing written corrective feedback. Four metacognitive strategies and six cognitive strategies with examples by (Oxford, 2017) are shown in Table 3.

Cognitive domain	Strategies	Strategy examples
Metacognitive strategies	Paying attention to cognition	- Paying attention in general. - Paying attention to what the teacher says in class. - Paying attention to what I am doing. - Paying attention to what the other students are saying. - Paying attention to my cognitive style and thinking about how to use it to best advantage in learning the language. - Paying attention to the video. - Paying attention to differences in points of view.
	Planning for cognition	- Listing my L2 learning goals in writing for the next two weeks. - Thinking about the textbook's stated objectives for the unit and then setting my own objectives. - Recognitizing multiple goals for a given task. - Deciding what to focus on. - Planning for how to approach the upcoming task. - Planning my schedule for writing an international law paper in the target language. - Planning to get the help and support that I need for progressing in all four skills.

Table 3: Strategies for metacognitive and cognitive strategies (Oxford, 2017)

Cognitive domain	Strategies	Strategy examples
Metacognitive strategies	Planning for cognition	- Planning my studies based on the complexity of the task and how energetic I feel. - Prioritizing tasks based on importance. Setting up an individualized study plan so I can progress more quickly. - Distinguishing between what I already know and what I still need to learn about ___ and focusing on the gap.
	Organizing learning and obtaining resources for cognition	- Finding a place where it is quiet enough to study the language. - Organizing my computer files to find my work more rapidly. - Organizing my desk and study area. Gathering the books and technology devices that I need. - Looking for opportunities to practice the language online. - Looking for tasks that encourage me to analyze, synthesize, or do other kinds of deep thinking in the language. - Making a list of the print or video material for my individualized study plan.
	Monitoring and Evaluating for Cognition	- Predicting which parts of the new lesson will be easy and which will be difficult. - Thinking about whether I know the material well enough to do well on the next test.

Table 3: Strategies for metacognitive and cognitive strategies (Oxford, 2017)

(Continue)

Cognitive domain	Strategies	Strategy examples
Metacognitive strategies	Monitoring and Evaluating for Cognition	- Sensing whether I will be able to recognize a certain sentence or phrase in an upcoming activity. - Checking my understanding while reading a chapter. - Considering my strategy use during a task and thinking about whether to change strategies. - Comparing my cognitive performance to course expectations (or to my own goals). - Deciding whether I have learned enough to go to the next textbook unit. - Evaluating whether the strategy I used for the task worked well. - Asking myself after a task or an event: How much do I know, what did I learn, and why is it important? - Considering whether the strategies I have been using this term are effective enough and whether I need to try other ones. - Considering my learning strategies to see which ones have worked the best for me in the long run and which ones no longer support me at my level of proficiency.
Cognitive strategies	Using the senses to understand and remember	- Examining photos and pictures that go along with articles I am reading in the language. - Looking at news videos so that I can hear the language and see the events at the same time.

Table 3: Strategies for metacognitive and cognitive strategies (Oxford, 2017)

(Continue)

Cognitive domain	Strategies	Strategy examples
Cognitive strategies	Using the senses to understand and remember	- Creating charts and figures to help me remember mental associations. Imagining the spelling of words in my mind. - Reading aloud both sides of the dialogue and recording them using different-sounding voices. - Writing a new word or character many times in order to remember it. - Practicing speaking while doing physical exercises.
	Activating knowledge	- Reviewing in my mind what I already know about the topic. - Mentally scan what I know by imagining my mind as linked pieces of information. - Using a KWL chart (what I Know, what I Want to know, and later … what I Learned). - Mentally envisioning drawing information from my mind to into my hand. - Asking my mind to give me what I need to know. - Remembering the original association I used to learn something, and then putting it into reverse to retrieve that information.
	Using reasoning	- Applying general rules to specific examples. - Using specific examples to help figure out the rules.
	Conceptualizing with details	- Comparing and contrasting the grammar of the new language with the grammar of my language. - Making an outline.

Table 3: Strategies for metacognitive and cognitive strategies (Oxford, 2017)

(Continue)

Cognitive domain	Strategies	Strategy examples
Cognitive strategies	Conceptualizing with details	- Analyzing the word, the conversation, the article, the story (breaking it into parts). - Using a "story grammar" or a plot outline. - Highlighting important words and phrases.
	Conceptualizing broadly	- Looking for the main idea (getting the gist). - Synthesizing material from several sources. - Summarizing material from one source. - Drawing a semantic map or picture that links various ideas. - Putting information into larger categories.
	Going beyond the immediate data	- Using existing clues to predict what will happen next. - Using existing clues to infer the meaning.

Table 3: Strategies for metacognitive and cognitive strategies (Oxford, 2017)

(Continue)

Although the cognitive and metacognitive strategies from Oxford (2017) do not specifically serve as the basis for student's cognitive engagement with written corrective feedback, the strategies presented in Table 3 have been used by many students in several studies (e.g., Han & Hyland, 2015; Zhang & Hyland, 2018). It can mean that some strategies are relevant to cognitive engagement with the feedback.

Many previous studies found that students who have a high level of cognitive engagement are successful in the revision of their writing, and the ones with limited cognitive engagement have difficulty in understanding written corrective feedback, which makes them not know how to respond to the feedback and fail to make any

modification accurately. For instance, Han and Hyland (2015) found that one of their participants highly cognitively engaged with written corrective feedback. She noticed most of the errors and processed half of them as she could give an accurate metalinguistic explanation for them. Their participant sought clarification of the feedback from the teacher by an optional teacher-student writing conference to help her process the teacher feedback. She also employed cognitive strategies such as repeating the correction from the teacher and noting what the teacher explained every grammar point related to the errors in her text. After that, she was able to correct almost all of the errors in her final draft. Similarly, Zhang and Hyland (2018) reported that the participant who had highly cognitive engagement rewrote and reorganized some words, sentences, and paragraphs in her essay while the other one deleted most of the errors and corrected only a few because of limited understanding of the given feedback.

According to the previous research (Han & Hyland, 2015; Zhang & Hyland, 2018; Zheng & Yu, 2018), student engagement with written corrective feedback is perceived as a "meta-construct" of the three perspectives of student engagement which are interrelated (Han & Hyland, 2015; Zhang & Hyland, 2018; Zheng & Yu, 2018). Some of the previously referred studies have reported the relationship between each dimension of student engagement and the other one. For example, correcting errors in writing (behavioral engagement) has been related to the level of noticing and awareness of the students (cognitive engagement) (Qi & Lapkin, 2001; Sachs & Polio, 2007), which means that not understanding the written corrective feedback can prevent students from making use of feedback to improve writing accuracy. Conversely, students who seek help in understanding written corrective feedback by using a dictionary or consulting teachers or friends (behavioral engagement) may facilitate processing the feedback (cognitive engagement) (Zheng & Yu, 2018). Another

example found in Han and Hyland (2015) is that one of their students was so overwhelmed (affective engagement) that she could not concentrate on editing her draft. She would avoid making corrections for the subsequent draft if she were asked to do it again (behavioral engagement). Based on the findings, it is possible to assume that the three perspectives of student engagement with written corrective feedback relate and influence to facilitate or inhibit each other, which will result in successful or unsuccessful text revision.

To sum up, cognitive engagement with teacher written corrective feedback is interpreted according to Noticing Hypothesis (Schmidt, 1990) and cognitive and metacognitive strategies to help the students understand the feedback and improve their English writing grammar accuracy based on the Strategic Self-Regulation (S^{2}R) Model (Oxford, 2017).

2.4 Previous studies on student engagement with teacher written corrective feedback

Han and Hyland (2015) conducted a multiple-case study to explore four university students' engagement with teacher written corrective feedback in the three dimensions: behavioral engagement, affective engagement, and cognitive engagement. The participants were asked to write a five-paragraph essay for two drafts. Indirect written corrective feedback was mainly provided. The findings revealed every participant engaged with the feedback differently, which reflected different degree of the engagement with the feedback. One participant showed deep engagement with the feedback by being able to correct most of her errors and regulate her negative emotions into motivation. Moreover, she requested to have a face-to-face writing conference to gain more understanding of the feedback. Another participant was found to have under-engagement with the feedback. Because she was very confident about her accuracy in writing, she saw that the teacher did not understand her sentence where the written corrective feedback was provided. She reported

that she was so overwhelmed that she could not concentrate on the error correction when she received the feedback. The third participant was reported that she could correct many errors but had little understanding. She often consulted with an online dictionary to check accuracy in her draft. When she received the written corrective feedback, she expressed her confusion as to what the feedback   Although she attended the writing conference like the first participant, she focused on content rather than accuracy because she believed that consulting an online dictionary could help her correct the errors. Although she made several corrections successfully, her revision was not made based on her understanding as she could not explain most of her errors accurately in the verbal report. The last participant was found not to engage with the feedback intentionally. When he received the feedback, he felt very happy because he received little written corrective feedback. While revising the errors, he asked his friend to work for him and relied on his friend's decision for error corrections because he reported that he was satisfied that he did not make many errors and confused by indirect written corrective feedback provided by the teacher. Therefore, in spite of his friend's support, he did not understand his errors. Han and Hyland (2015) concluded that student engagement involved many perspectives, and each perspective interrelated to one another dynamically.

Zheng and Yu (2018) explored how 12 female low-proficiency undergraduates engaged with teacher written corrective feedback behaviorally, affectively, and cognitively. The participants had to write an essay in two drafts. The teacher provided both direct and indirect corrective feedback, but the majority of feedback provided was the direct feedback. The findings revealed that, regarding affective engagement, all the participants showed their willingness to receive the feedback from the teacher, but their degree of willingness varied as some participants believed that written corrective feedback was necessary whereas the other thought it may be optional. They considered the feedback was effective for them, but they pointed out that it would have been better if they had had a chance for teacher-student writing

conferences and received verbal feedback. As for their behavioral engagement, they could correct their errors where direct corrective feedback was provided more successfully than the ones which were identified by indirect corrective feedback. While revising their draft, they reported that they examined the feedback carefully and reread their text. Some errors were corrected by comparing them with the Chinese counterparts. When they sought for help, they explained that they consulted on websites. Some of them even asked their friends or other English writing teachers. For cognitive engagement, the participants were found to have little understanding to the feedback, especially indirect written corrective feedback. Most of them reported that they were confused about the indirect feedback because they did not understand what it told them about the errors. Consequently, they used Chinese translation into English without considering the context. In addition, their cognitive and metacognitive strategies were also found to be limited. Most of them explained that they just read the written corrective feedback and tried to locate the errors and correct them. However, they still could not make the successful revision. In summary, Zheng and Yu (2018) assumed that it could be their limited linguistic knowledge was not enough for them to identify the errors.

3. Writing Instruction and Assessment

This section describes approaches to teaching writing and writing assessment used in the writing classrooms.

3.1 Teaching writing approaches

Hyland (2019) explained there are six approaches to teaching writing in a writing classroom: structural, functional, expressive, process, content, and genre. He pointed out that each approach is rather a particular perspective of teaching writing approach that can complement other approaches than a new approach to teaching writing to replace old ones. Generally, writing courses combine these approaches, but one of them may be emphasized more than the others.

First, structural approach focuses on grammatical and lexical knowledge to construct a text according to particular models such as letters and essays (Hyland, 2019). Hyland (2019) explained there are four steps to develop writing skills through this approach. In the beginning, students learn specific grammar points and vocabulary through reading to help them be familiar with particular grammatical and lexical knowledge used in the targeted text. Then they are encouraged to use grammar and vocabulary in fixed patterns through controlled writing. After that, students copy a model text in guided writing by organizing ideas and writing like the model text. Finally, students can write a targeted text on their own in free writing. While the structural approach has its merits to help low-proficiency students build their vocabulary and feel more confident, emphasizing accuracy rather than meaning can make students encounter difficulties in writing in real situations. However, it does not necessarily mean learning linguistic features for a particular text should be ignored in writing class. Students should be able to apply grammar appropriately to convey their ideas purposefully in real communication.

Second, functional approach emphasizes a function of text which requires particular language forms to express appropriate meaning through writing, such as describing, classifying, or narrating (Hyland, 2019). Students are taught how to write effective paragraphs by following a pattern of paragraphs and ordering the features of a paragraph, including a topic sentence, supporting sentences, and a concluding sentence. The advantage of this approach is that it can help students see the organization of paragraphs or essays clearly.

The third teaching writing approach is creative expression approach which views students as creative writers who express their own voice (Hyland, 2019). This approach does not have specific steps of instruction since writing is seen as sharing students' views on topics. Teachers should allow students to express their ideas and should not force how to express their ideas for their writing. Correcting errors is emphasized to be responded to less than

students' ideas. However, this approach to teaching writing seems to ignore cultures or communities which value differently from writers. Moreover, it is hard to evaluate students' texts with certain writing aspects.

Fourth, process approach is one of the teaching writing approaches that emphasize on helping students develop strategies for generating, drafting, and revising drafts (Hyland, 2019). This approach views the writing process that can go back and forth between different stages rather than follow each stage one by one, as shown in Figure 6. For example, while drafting a text, students search for more information and add it to the draft later. A writing teacher should assist students in developing writing strategies such as generating ideas, brainstorming, outlining, and others throughout the writing process. Moreover, teachers should provide feedback to students' text because a teacher's response is a crucial element during the writing process (Hyland, 2019).

Figure 6: A simplified model of process writing instruction (Hyland, 2019)

The fifth teaching writing approach focuses on content, which involves writing about a common topic such as environments, health issues, and technology (Hyland, 2019). Students should have some background knowledge about the topic they are going to write about. This approach can vary levels of difficulty of the writing task based on students' proficiency.

Teachers can provide a lot of information related to the topic to help low proficiency students generate and organize the ideas whereas high proficiency students may be asked to search information or collect data before writing with the teacher's aide for data collection strategies. Moreover, this writing approach tends to require reading a lot to write a text so that students can learn the elements used in the written text of the specific genre apart from the content knowledge.

Finally, genre approach is the teaching writing approach that views writing has its purposes and particular patterns to communicate with readers (Hyland, 2019). Teachers who implement this approach to their instruction focus on how to write a text that follows social conventions to achieve a particular purpose. For example, if a writer wants to explain a procedure of cooking pasta, it is necessary to write a text that shows how to cook with a particular rhetorical structure so that a reader can understand the purpose of the text and its genre.

Based on these six approaches to teaching writing, the process approach was implemented for the writing instruction in the study because this approach requires teachers to respond to a student's text. Written corrective feedback can be provided when students are editing their piece of writing. To be more specific about the steps of the process approach, the writing process proposed by Nation and Macalister (2020) in Figure 7 was employed.

According to Nation and Macalister (2020), the first stage is considering the goals of the writer. Students should have a clear goal to understand the communicative purpose of a text. It may make the text less cohesive or out of topic if they do not know the purpose to write it. The second stage is having a model of the reader. Students should have a clear picture of to whom they are writing. Otherwise, the text will have an inconsistent style or provide too much or too little information for their audience.
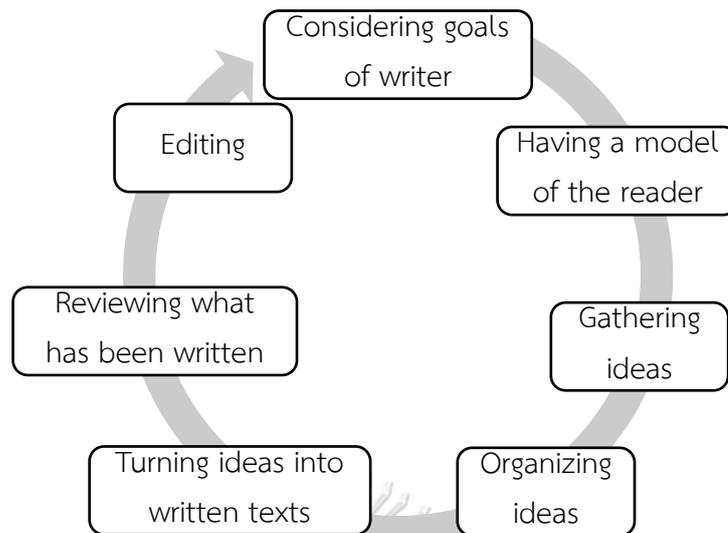
Figure 7: The seven steps of the writing process (Nation & Macalister, 2020)

The next step is gathering ideas. Students should search for a lot of relevant and interesting information from various sources. Organizing ideas is the fourth stage of the writing process. Students should organize their ideas to make them easy to follow for readers in a logical way. Then, students will be at the stage of turning ideas into written texts. Students should express their ideas clearly and fluently. Ambiguous meaning and grammatical errors may occur if they cannot express their ideas through a text well enough. The sixth stage of the writing process is reviewing what has been written. It is important to check whether all information they want to express has been included in their text. It is possible to add more information to the text. The text must be revised if it is not comprehensible. Editing is the last stage of the process. Students should make corrections to their text or make some changes to the organization of the text. It is not necessary to focus on accuracy if students still focus on the ideas or the organization of the text.

Although there are many versions of this writing approach, such as White and Arndt (1991) and Hedge (2005), the writing process based on Nation and Macalister (2020) emphasizes the stages that students should consider their purpose of writing (considering goals of the writer) and their

audience (having a model of the reader), which makes writing tasks more meaningful. In addition, students may become more aware of what they are going to write.

3.2 Writing assessment

Hyland (2019) explained there are three common approaches to scoring a student's text: holistic, analytic, and trait-based scoring.

3.2.1 Holistic scoring

Holistic scoring is a form of grading a student's text by providing one grade that represents overall performance of the piece of writing. Raters evaluate the quality of the whole text with their impression based on each grade of which description includes every aspect of the writing. The grade reflects students' performance rather than errors found in their text. This scoring approach is quite fast for assigning a grade, but difficult to interpret the student's performance based on a single grade because holistic scoring does not provide diagnostic information about a student's writing (Hyland, 2019; Weigle, 2002).

3.2.2 Analytic scoring

Analytic scoring is rating each aspect of students' texts rather than the whole text like holistic scoring. Sometimes, each aspect is weighted differently. This scoring approach allows teachers to get information about the strengths and weaknesses of a student's text because of the precise description of each aspect, such as content, organization, and language use, so that teachers can give clear feedback to students. However, it is time-consuming because teachers may need to read a text more than once in order to rate each component of a student's text (Hyland, 2019; Weigle, 2002).

3.2.3 Trait-based scoring

Hyland (2019) explained that trait-based scoring is different from holistic and analytic scoring in terms of context. The criteria for this scoring approach are designed to evaluate the specific writing task, whereas the criteria for holistic and analytic scoring are created to evaluate the quality of any text. Teachers can use either primary trait scoring or multiple trait scoring. The former is a scoring approach that focuses on only one relevant element of a writing task, while the latter is designed to evaluate different features that are relevant to a writing task, like analytic scoring. Since these two approaches of the trait-based scoring are very specific to the task, the focus of the rubric is in accord with the task more than holistic and analytic scoring. Therefore, the feedback is more pertinent to what students are learning to write. However, trait-based scoring rubrics cannot be used to evaluate other kinds of writing tasks. It is necessary to modify or create the new rubric, which is very time-consuming.

In this study, analytic scoring rubric is used to measure students' English writing grammar accuracy because it is easier to rate the accuracy of each error category in the text, and it provides the students more specific feedback to help them improve the accuracy.

Summary

More research is needed to address more about student engagement with written corrective feedback. How students engage and use the feedback is very crucial for writing instructors and researchers. It helps us understand why some students engage more than others and why some of them succeed in revising the text and gaining more accuracy in writing while others do not. Many studies on written corrective feedback have been done on examining its effectiveness and found that it is effective and helpful for second language writing. However, not every student can get the benefits of receiving written corrective feedback.

It is important to investigate in what way and how students use the written corrective feedback behaviorally, affectively, and cognitively and to what extent it relates to the accuracy in writing. Understanding how they engage with the feedback can raise writing teachers' awareness of the appropriate feedback delivery, which results in higher engagement with the feedback. Several researchers have mainly investigated the student engagement of university students from all three perspectives. However, there has not been any research that has covered how high school students engage with written corrective feedback behaviorally, affectively, and cognitively as well as its association to the grammatical accuracy in writing as the outcome. This study may be the first attempt to contribute to the literature by filling the gap regarding high school students' engagement with written corrective feedback and its influence on the outcome. The methodology of this research is provided in the Chapter 3.

Chapter 3
Methodology

The purpose of this chapter is to present the research methodology used for this study. This study aims to explore student engagement with written corrective feedback in three dimensions: behavioral engagement, affective engagement, and cognitive engagement in view of high school students' perspectives and examine how student engagement is related to English writing grammar accuracy. The conceptual framework, research design, and data collection procedures for this study were presented in this chapter.

Conceptual Framework

In this study, the conceptual framework mainly explored the nature of the high school student engagement with teacher written corrective feedback in all three perspectives and how their engagement was related to the learning outcome as English writing grammar accuracy, as shown in Figure 8.
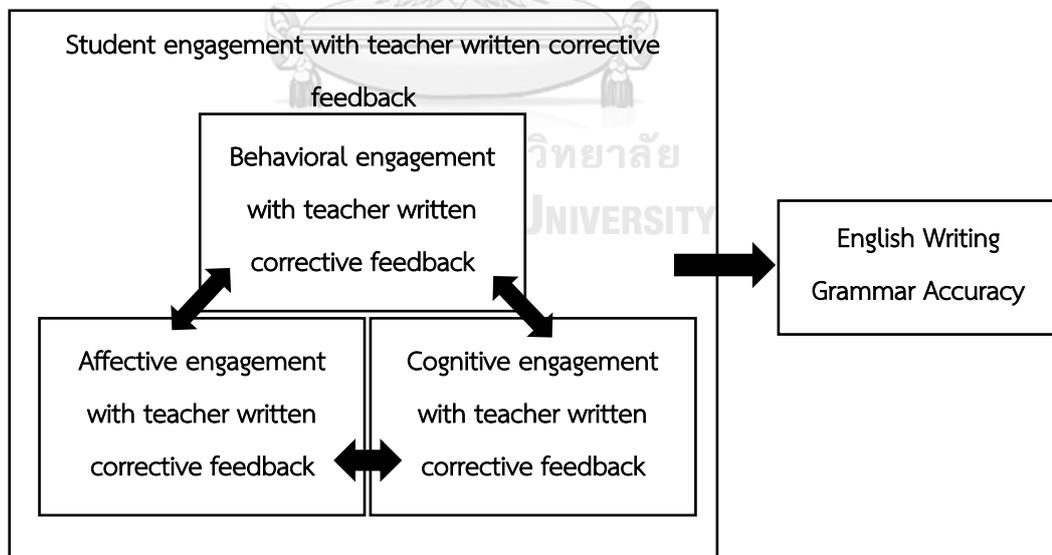
Figure 8: Conceptual framework of the study

Behavioral engagement with teacher written corrective feedback referred to students' revision strategies, which were adapted from according to Ferris (2006): correct revision, incorrect revision, error deletion, substitution, and no change. In addition, the observable strategies for improving their text were also included. Any changes in the text indicated the behavioral engagement in view of their editing strategies in response to the feedback. It was essential to investigate this engagement to see whether and how they edited their writing according to teacher written corrective feedback. Avoiding editing or attempting to revise their draft can reflect their behavioral engagement as well as other types of student engagement.

Affective engagement with teacher written corrective feedback was considered participants' emotional reactions and attitudes towards the feedback after receiving it. Emotional responses to the feedback can be either positive such as pleasure, or negative such as upset Mahfoodh (2017), and attitudes towards the feedback can be positive, neutral, and negative (Han & Hyland, 2015). Affective engagement can play an important role in making a revision. Low affective engagement can lead to rejecting teacher written corrective feedback and can make students less engage with the feedback behaviorally and cognitively.

Cognitive engagement referred to students' efforts and their cognitive and metacognitive strategies to understand teacher written corrective feedback as well as the three levels of awareness of processing written corrective feedback: perception, noticing, and understanding according to Noticing Hypothesis (Schmidt, 1990) as the bases for investigating this type of engagement. Students who have high cognitive engagement can regulate their plan to revise their text and deep process the written corrective feedback, making them revise the text successfully and correct most errors (Han & Hyland, 2015). Low cognitive engagement can prevent them from understanding the feedback, resulting in bad feelings and no attempt to make corrections.

In line with O'Donnell and Reschly (2020, p. 56), the researcher perceived student engagement with written corrective feedback as a "meta-construct" of the three perspectives of student engagement which are interrelated (Han & Hyland, 2015; Zhang & Hyland, 2018; Zheng & Yu, 2018) because it may provide deeper insights about students' engagement than one perspective of the student engagement can offer (Fredricks et al., 2004). Therefore, seeing the dynamics of student engagement in the three dimensions may allow more understanding of how students engage with teacher written corrective feedback.

Learning outcomes for this study were interpreted as English writing grammar accuracy resulting from student engagement with teacher written corrective feedback. Based on the findings of the previous studies (e.g., Han & Hyland, 2015; Zheng & Yu, 2018), it was reported that students who had high student engagement in every or some dimensions could revise their text successfully while those who have low student engagement likely fail to edit their writing. Therefore, it is possible that there is an association between student engagement and English writing grammar accuracy.

Research design

This study employed a mixed-method experimental design by adding qualitative data into an experiment in order to provide students' experience with the quantitative results so that the quantitative outcomes will be validated with qualitative data from the participants. The procedure for conducting an experimental mixed-method design is shown in Figure 9.
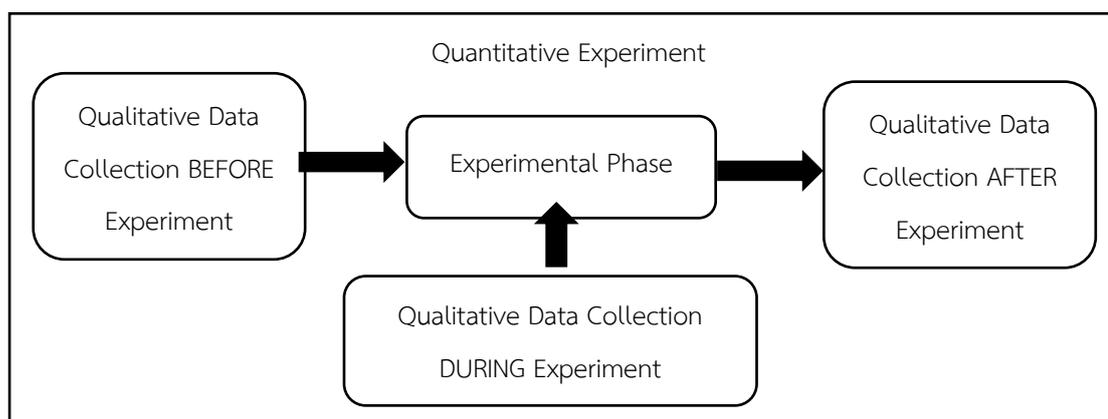
Figure 9: The procedural diagram for the mixed-method experimental design (Creswell & Creswell, 2017)

According to Figure 9, in the beginning, the qualitative data before the experimental phase was collected in order to understand the participants and the context for conducting the research. Next, in the experimental phase, the quantitative data was obtained to assess the participants' writing ability in terms of accuracy before and after they engaged the teacher written corrective feedback while the qualitative data was obtained to investigate how the participants engaged with teacher written corrective feedback on their text behaviorally, affectively, and cognitively. Finally, the qualitative data after the experimental phase was collected to obtain more information about the participants' reflection of the impacts of student engagement on English writing grammar accuracy.

Population and participants

Population and Sample

The population in this study were upper-secondary students in public schools in Bangkok. The sample was randomly selected, and the school which allowed the researcher to teach and collect data during the pandemic was chosen. A letter of permission to conduct the study and the research proposal were sent to the public school randomly to gain the permission to allow the researcher to do the study in the school.

Participants

After the researcher sent the letter of permission from the faculty and the research proposal to public schools in Bangkok, Satri Si Suriyothai accepted the request for conducting the research in the school. Then, the researcher was assigned to conduct the study with 26 Grade 10 students. They were not in any English programs and enrolled in English Reading-Writing as an additional English course. Purposive sampling was used as a sampling procedure for quantitative data collection, and random purposive sampling (Mills & Gay, 2019) was used as a sampling procedure for qualitative data collection. Random purposive sampling was employed by randomly selecting 20 percent of all the participants or five participants. The researcher used a website called "Stattrek," which offers a random number generator to select the participants for qualitative data collection.

The five participants for the focus group interview were all girls whose age was between 15-16 years old. There were three participants who continued their study in the same school, while the other two gained the admission to study. The three participants had had experiences in learning English writing and writing a short text during the Grade 9, but the two participants had not learned English writing before, they used to do a writing task.

The researcher decided to select a particular sample of participants who did not study in an English program to minimize the environment that may influence the development of the participants outside the classroom, such as being exposed to other English writing activities from other classes. The selected participants also enrolled in English Reading-Writing as an additional English course in order that they could have a better focus on reading and writing skills during the study.

In order to obtain the participants, the researcher had asked for permission to enter the school where the research took place and conducted the research by sending a letter of permission from the faculty and the research proposal. When the researcher was allowed to conduct the study in

the school, the informed consent form was read in the class and sent to all the participants via Google Classroom. Then they responded to the informed consent in the Google Classroom by writing their name as they decided to be the participants of the study before the study. In addition, the researcher explained the research plan to them and told them that any personal information would be confidential, and it did not affect anything to them if they wished to withdraw during the study. The informed consent form is provided in Appendix A.

Instruments

The instruments used to collect the data for this study were writing tests, a writing task, semi-structured interview protocols, an analytic scoring rubric for English writing grammar accuracy, and a questionnaire. The description of each instrument is as follows:

1. Writing tests

In this study, the writing tests were used to examine the participants' writing ability in terms of English writing grammar accuracy. The tests consisted of a writing pre-test and a writing post-test. The writing pre-test was administered before the intervention in order to measure students' writing proficiency in accuracy as a part of writing instruction. In contrast, the writing post-test was administered after the participants finished the writing task to examine the participants' English writing grammar accuracy after their engagement with the written corrective feedback, which was used for the present research. The writing tests are provided in Appendix B.

The writing tests consisted of one short prompt to write a descriptive paragraph at least 120 words within 50 minutes. The pre-test and the post-test were parallel and had a slightly different prompt about describing people. The quantity of words for the text was specified based on writing exercises from many published English coursebooks for upper-level secondary students such as Upstream.

Each of their writing exercises limits a quantity of words in the range of 100 to 150 words. Therefore, a minimum of 120 words to write a paragraph was appropriate for the participants.

In order to validate the writing tests, content validity was considered to determine whether the tests were relevant to the research objectives or not. The index of item-objective congruence (IOC) was employed to check the content validity of the tests by three experts in the related field of English language teaching to evaluate the item-objective congruence based on the three levels of the scores: -1 (incongruent), 0 (questionable), and +1 (congruent). The results of content validity validation for the writing tests by the three experts were 1.00, which was acceptable for testing. The prompts were revised following their suggestions. After that, the writing tests were measured for their reliability. Inter-rater reliability was used to find the consistency of scoring by two raters: the researcher and a colleague who was an English teacher. Then the scores from both raters were calculated by correlating the two sets of scores through Pearson product moment correlation (Pearson r). The results of inter-rater reliability were 0.987 for the writing pre-test and 0.989 for the post-test, which was acceptable.

2. Writing task

There were two purposes of the writing task in this study. First, for quantitative data collection, it was for examining the total number of all eleven error categories and the total number of each type of them before and after engaging with written corrective feedback from the researcher as a writing instructor. After that, they were scored according to the analytic scoring rubric for accuracy in English writing. Second, for qualitative data collection, it was used to examine what revision strategies the participants used to edit the errors according to Ferris's (2006) student revision analysis categories and to what extent

they used particular revision strategies for error correction according to teacher written corrective feedback. In addition, it was used as an additional prompt for an interview to investigate how the participants engaged with teacher written corrective feedback behaviorally, affectively, and cognitively after they submitted the final draft. The writing task is provided in Appendix C.

There was one writing task in this study. The task provided one prompt and required the participants to write a descriptive paragraph at least 120 words. The topic of the writing task was about describing a classmate who is in the same class as the participant.

The study did not require the participants to do two or more writing tasks because it was possible that the participants could do subsequent writing tasks more accurately because of their familiarity with the first writing task rather than their engagement with the teacher written corrective feedback.

In order to examine the validity of the writing task, content validity was considered to check whether the writing task was in accordance with the standards set in the national curriculum. A table of writing task specifications was made and compared with the standards stated according to the Basic Education Core Curriculum. It was evaluated with the index of item-objective congruence (IOC) by three experts in the related field of English language teaching to examine whether the writing task was relevant to the standards set in the Basic Education Core Curriculum or not. Like the validation of the writing tests, it was acceptable if its average score of the index of item-objective congruence was higher than 0.5. The result of the content validity for the writing task was 1.00, so it was suitable to use for this study. In addition, the writing prompt of the writing task was revised according to the experts' suggestions.

3. Semi-structured interview protocols

Semi-structured interview protocols were used to explore how the participants engaged with teacher written corrective feedback in all three dimensions: behavioral engagement, affective engagement, and cognitive engagement. The questions for the interview covered the following aspects:

1. Aspects of questions to cover in the interview before the writing pretest

      1.1 participants' past experiences and attitudes towards learning English writing

      1.2 participants' past experiences and attitudes towards teacher written corrective feedback

2. Aspects of questions to cover in the interview after the final draft submission

      2.1 participants' behavioral engagement with teacher written corrective feedback during the editing phase of the writing process

      2.2 participants' affective engagement with teacher written corrective feedback during the editing phase of the writing process

      2.3 participants' cognitive engagement with teacher written corrective feedback during the editing phase of the writing process

3. Aspects of questions to cover in the interview after the writing post-test

      3.1 participants' reflection of how their engagement with teacher written corrective feedback contributed to their English writing grammar accuracy

Since the study aimed to collect qualitative data before, during, and after engaging teacher written corrective feedback, there

were three semi-structured interview protocols. The first interview protocol was used to understand the participants about their past experiences and attitudes towards English writing and teacher written corrective feedback. The second one was for understanding how the participants engaged with the feedback behaviorally, affectively, and cognitively to edit the grammatical errors in their draft. The last interview protocol was developed to help explain how their engagement with the written corrective feedback influenced English grammar writing accuracy. The interview protocols are provided in Appendix D.

In order to validate the interview protocols, after the interview questions were developed, construct validity was considered by checking whether the content of the interview questions was related to the theories and the frameworks used for constructing a set of interview questions or not. They were validated through the index of item-objective congruence (IOC) by three experts in the related field of English language teaching. The result of the validation was that every question from all three interview protocols had the average score of the index of item-objective congruence at 1.00, which could be interpreted that the questions were relevant to the theories and the framework used in the study. Some questions were revised according to the experts' recommendation. After that, a pilot test was carried out on a few students who did not participate in the study to decide which questions to use. After the tryout, all the questions could be understood by them. However, some questions were revised for more clarity.

The process of the focus-group interview started with asking the participants for their permission to audio-record the interview and explaining the objectives of the interview to the participants. During the interview, the technical terms such as "behavioral engagement," "affective engagement," and "cognitive engagement" were briefly

explained to let them know what the researcher would like to focus and simplified these terms into more simple terms like "what you do" for behavioral engagement, "how you feel" for affective engagement and "how you understand" for cognitive engagement. When one participant answered a question, the others may answer or show agreement or disagreement with and elaborate why and how, if necessary, in order to gain more information.

4. Analytic scoring rubric for English writing grammar accuracy

The analytic scoring rubric for English writing grammar accuracy was used to rate the English writing grammar accuracy when they had the writing tests and the writing task. The criteria were adapted from the error categories and codes used in teacher marking and in analysis Ferris (2006). There were twelve error categories: word choice, verb tense, verb form, word form, articles, singular-plural, pronouns, run-on, fragment, sentence structure, idioms, and subject-verb agreement. The analytic rubric score for English writing grammar accuracy is provided in Appendix E.

The validation of the analytic scoring rubric for accuracy in English writing was evaluated with the index of item-objective congruence (IOC) by the three experts in the related field of English language teaching to examine its content validity whether it was appropriate to use in the study or not. After validating the scoring rubric, every item had an average score of 1.00 except "idioms," which had an average score below 0.5 and was removed according to the experts' recommendations. Therefore, there were eleven error categories in the scoring rubric. Next, it was tried out on students from different classes to determine whether it was effective to discriminate between students who could write accurately and who could not. Then, the rubric score was adjusted by making the description of each level of scores more objective.

5. Questionnaire

The questionnaire was used to examine and reflect to what extent the participants engaged with teacher written corrective feedback after editing the errors for the final draft. The questionnaire was designed by reviewing the constructs in the present study, such as the student revision analysis categories (Ferris, 2006) for behavioral engagement, and Noticing Hypothesis (Schmidt, 1990) and Strategic Self-Regulation (S^2R) Model (Oxford, 2017) for cognitive engagement as well as reviewing the findings from the previous studies (e.g., Han & Hyland, 2015; Zheng & Yu, 2018) in order to develop statements based on their findings. After that, the statements were adapted to make them more related to high school student context. The questionnaire is provided in Appendix G.

There were 30 statements in total, and they were divided into three parts according to the types of student engagement with written corrective feedback: behavioral engagement, affective engagement, and cognitive engagement. Each set of the ten statements had two types of statements: the six statements regarding individual perspectives of student engagement and the others concerning the interrelationship between one type of student engagement and the other one. The questionnaire had two kinds of responses: Yes and No to measure their agreement with the statements. Because the statements were written in terms of the behavioral actions that were related to the three types of student engagement rather than the opinions, using the "Yes" and "No" for the responses was appropriate to confirm whether the participants engaged with the feedback in a similar way that the statements presented or not. The answer "Yes" was interpreted that the participants engaged the written corrective feedback according to the statements while the answer "No" was interpreted that they did not engage the feedback as stated by the statements.

After the development of the questionnaire, it was validated by considering its construct validity. It was evaluated through the index of item-objective congruence (IOC) by three experts in the related field of English language teaching to examine whether the statements in the questionnaire reflected student engagement with teacher written corrective feedback according to the constructs or not. The result of the validation was that all statements were acceptable because they had 1.00 as the average score of the index of item-objective congruence (IOC). Some statements were revised based on the experts' suggestions. After that, the questionnaire was piloted by some participants who were not the participants in this study to check if they could understand it. Then, some statements were adjusted because of difficult words and complex sentence structures. In order to calculate the reliability of the questionnaire, the questionnaire was tried out on some participants who were not the participants in this study and had experience in editing errors following written corrective feedback. It was calculated by Kuder-Richardson 20 (KR20) to consider its internal consistency reliability. The result of the reliability was 0.62, which was sufficient since it is over 0.60 (Mills & Gay, 2019). Hence, the questionnaire was suitable to use in the study.

Data collection procedure

This study collected data from the five instruments: two writing tests, one writing task, semi-structured interview protocols, a questionnaire, and a modified analytic scoring rubric. There were three phases for data collection, as shown in Figure 10, after the researcher had contacted and gained permission from a school to conduct a study with upper secondary school students.

Phase 1

This phase began with selecting 20 percent of the participants, or five participants, randomly by using the website "Stattrek" to have

a focus group interview with the researcher to understand the participants' past experiences and attitudes towards English writing and teacher written corrective feedback. After that, all the participants had the writing pre-test to measure the participants' writing ability in regard to English writing grammar accuracy, evaluated with the analytic scoring rubric for accuracy in English writing.

Phase 2

During the writing process, this phase started when the participants had finished reviewing and revising their ideas in their first draft of the writing task according to the teacher feedback on content. When the participants submitted their second draft, the researcher as the writing instructor provided indirect written corrective feedback on eleven error categories and codes used in teacher marking adapted from Ferris (2006). In order to minimize the differences in text length, the errors within the first 100 words were examined. Then, the participants made corrections according to the feedback and submitted the final draft. After that, the researcher examined the final drafts to analyze the revision strategies based on student revision analysis categories (Ferris, 2006). After that, the focus group with the five participants who had been interviewed from the first interview was conducted to investigate how they engaged with teacher written corrective feedback behaviorally, affective, and cognitively. Their second draft and final draft were used as a prompt for the interview. After the focus group interview, the questionnaire was administered to all the participants to report their engagement that was close to them.
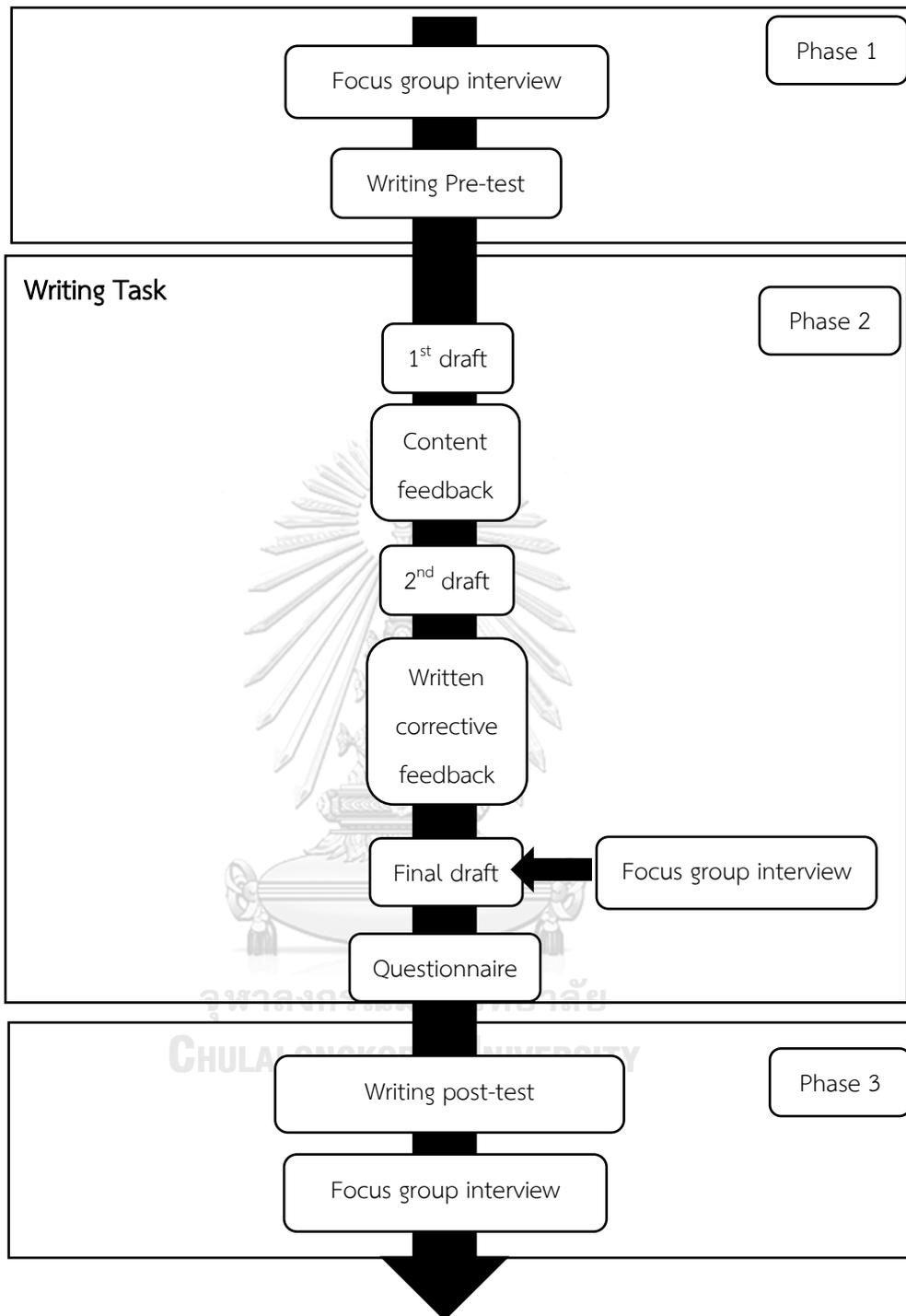
Figure 10: Data collection procedure

Phase 3

This phase began after the participants had submitted their final draft of the writing task, had the focus group interview with the researcher, and responded to the questionnaire. The writing post-test was administered to measure their English writing grammar accuracy in order to determine whether they could write more accurately or not. After that, a focus group interview with the five participants was carried out to investigate their reflection of how their engagement with the teacher written corrective feedback in three dimensions contributed to their accuracy in the writing post-test.

Writing instruction for the study

The writing process proposed by Nation and Macalister (2020) was employed as the writing instruction shown in Figure 5. In this study, there were seven steps in this proposed writing instruction for the present study, as shown in Figure 11.

Stage 1: Considering goals of the writers

In this stage, the participants were encouraged to set a goal for their writing so that they had a clear purpose of what to write. They practiced considering purposes of various texts and setting a goal for their writing based on the given writing prompts.

Stage 2: Having a model of a reader

The participants were asked to consider what kind of texts was suitable for particular groups of readers such as classmates and travelers. They set a type of reader for their writing based on the given writing prompt to have a clear picture of to whom they were going to write.

Writing Process	Learning Activities	Product

| Stage 1: Considering goals of the writers | Identify the purpose for the writing | |

| Stage 2: Having a model of a reader | Identify the audience for the writing | |

| Stage 3: Gathering ideas | Generate ideas about the given topic | |

| Stage 4: Organizing ideas | Reconsider initial ideas before the first draft | |

| Stage 5: Turning ideas into written text | Write a paragraph as a draft | 1st Draft |

| | Content feedback (Teacher) | |

| Stage 6: Reviewing what has been written | - Check and discuss the ideas in the draft to revise the ideas
- Respond to others' writing in peer review (Content feedback from friends) | 2nd Draft |

| | Written corrective feedback (Teacher) | |

| Stage 7: Editing | Edit the grammatical errors according to teacher written corrective feedback | 3rd Draft |

Figure 11: The proposed writing instruction for the study

Stage 3: Gathering ideas

The participants were introduced to some useful strategies for gathering ideas for their writing, such as brainstorming and concept mapping so that they were able to have a lot of interesting ideas. If the participants had limited knowledge about the topic, they were encouraged to search for more information.

Stage 4: Organizing ideas

This stage focused on classifying ideas gathered in the previous stage into groups or themes. The participants may add or abandon the ideas as they were organizing ideas. It was possible that they may discover some new ideas as well. Outlining was a writing strategy that was introduced to the participants for organizing ideas.

Stage 5: Turning ideas into written text

In this stage, the participants wrote a text based on their ideas clearly. During writing, some learners may have difficulty in expressing their ideas into written text while the others found it easy to write. They were encouraged to use strategies such as consulting a dictionary or asking help from their peers to help them express their ideas for their text. In this study, a teacher-student writing conference was available for every participant who wanted to consult with the researcher. The participants finished their first draft in this stage.

Stage 6: Reviewing what has been written

This stage emphasized reviewing ideas of the text rather than errors. After they finished the first draft, the participants were trained how to respond to others' writing beforehand to make more focused responses that were helpful for others' writing. They were asked to find the strengths and weaknesses in their own draft and other peers' draft. When they received a peer response, they could make some changes to their draft, which resulted in the second draft. Besides the peer feedback, the feedback on content by the writing instructor was also provided in this stage.

Stage 7: Editing

In this stage, the participants received written corrective feedback from the researcher as their writing instructor. They had to make the correction based on the feedback. In this study, indirect written corrective feedback was provided at this stage. Since the study included error codes for the written corrective feedback, the error codes were introduced to the participants to help them understand which error codes referred to before receiving the feedback.

During the study, the writing instruction took place online via Google Meet due to the coronavirus pandemic. Teaching writing online made the researcher unable to observe the classroom much because the participants preferred to turn off the camera during the study. Moreover, some participants sometimes had technical problems so that they could not participate the in-class activity. Throughout the writing process, every participant made drafts and revised them on Google Docs as an online writing platform. Then they submitted the drafts in the Google Classroom to the researcher so that the researcher could download their files to provide written corrective feedback and send them back to the participants. The writing lesson plans are provided in Appendix H.

For English writing assessment, an analytic rubric score for English writing, which was adapted from the analytic rubric score "ESL Composition Profile" by Jacobs et al. (1981: cited in Weigle, 2002, pp. 115-116), was employed to assess the participants' final draft for the writing instruction but not for the research. The rubric score for English writing is provided in Appendix F.

The delivery of the feedback

The written corrective feedback in the study was provided by locating errors by underlining and providing metalinguistic clues but not giving correct forms of the errors. It was given at the editing stage, which was the last step

in the writing process in order that the participants could fully engage in editing errors in their draft.

The feedback focused on eleven error categories according to the analytic scoring rubric adapted from the error categories and codes used for marking (Ferris, 2006). Since some error categories such as sentence structures (SS) and fragments (F) dealt with the errors at the phrase level or the sentence level, any phrases or sentences with those errors were entirely underlined. In addition, if two or more different errors in the same sentence were found, multiple error codes were provided on multiple levels and underlines with different colors. The examples of the feedback delivery were presented in Figure 12.

The feedback was delivered by writing the feedback on the participants' draft, which was an electronic file. The researcher provided indirect written corrective feedback for the participants when they submitted the second draft. The errors were underlined. Metalinguistic clues, which had been introduced before receiving teacher written corrective feedback, were provided above the underlined errors.

	SV
Example 1:	My friend <u>live</u> in Bangkok.
	F
Example 2:	<u>Alex my best friend</u>
	SS
	SS
Example 3:	She <u>has tall, thin</u>.

Figure 12: Feedback delivery examples

Data analyses

This section presents the data analysis used in this study, divided into two parts based on two research questions.

1. Data analysis for the first research question

The first research question was to examine how student engagement with written corrective feedback is related to accuracy in English writing. The procedure for data analysis to answer the first research question was as follows:

Quantitative Data Analysis:

1. The first 100 words in the writing pre-test and post-test were rated according to the analytic scoring rubric for accuracy in English writing.

2. Because the participants in this study were fewer than thirty, it could not be assumed that the scores were under a normal distribution (Pagano, 2013), so they were analyzed to determine to use parametric or non-parametric statistics to analyze the data. Consequently, Shapiro-Wilk test was used to determine the normality of pre-test and post-test scores. If the p-value is more than .05, the score is normally distributed (Salkind, 2007). The result showed that the pre-test (p =.082) and post-test (p = .481) scores were normally distributed, as assessed by Shapiro-Wilk test. Therefore, the test scores could be analyzed by using parametric statistics.

3. The scores for English writing grammar accuracy between the writing pre-test and the post-test were calculated by dependent sample t-test to check whether there was a significant improvement because of indirect written corrective feedback provision although calculating the dependent sample t-test did not relate to the research question.

4. The questionnaire from the participants was collected, and their responses were interpreted as the scores by counting the answer

"Yes," which was worth one point and the answer "No" that was worth no point. The frequency was used to count the responses.

5. The scores from the questionnaire and the English writing grammar accuracy scores from the writing post-test were evaluated to determine a linear relationship, an outlier, and normality (Sheskin, 2011) before testing the relationship between student engagement with the teacher written corrective feedback and their English writing grammar accuracy through Pearson product-moment correlation coefficient. A linear relationship was examined through a scatterplot (Sheskin, 2011), and it was found that there was a linear relationship between the two sets of scores. Regarding the outlier, no outliers were identified. For the normality, they were normally distributed, as assessed by Shapiro-Wilk test. As a result, the scores were suitable to be analyzed by Pearson product-moment correlation coefficient.

6. The English writing grammar accuracy scores from the writing post-test and the engagement scores from the questionnaire were analyzed through Pearson product-moment correlation coefficient.

2. Data analysis for the second research question

The second research question intended to explore how the participants engage with teacher written corrective feedback behaviorally, affectively, and cognitively.

Semi-structured interview protocols were used to explore the participants' engagement with the written corrective feedback before, during, and after engaging with teacher written corrective feedback from the three perspectives. The data obtained from every focus group interview were analyzed through content analysis according to Creswell (2012). The information was transcribing and exploring the data from the interview to have a general sense of the data. After that, the researcher divided the data into text segments, labeled them with codes, and grouped them as themes. Overlapped or redundant codes

will be disregarded (Creswell, 2012). The data after the content analysis were regarding high school students' engagement with the teacher written corrective feedback in the three perspectives: behavioral engagement, affective engagement, and cognitive engagement.

Data analyses for each research question in this study were summarized in Table 4.

Research Questions	Research Instruments	Elicitation Techniques	Data Analysis
1. How is student engagement with teacher written corrective feedback related to accuracy in writing?	1. Writing tests 2. Questionnaire	1. Analytic scoring rubric for English writing grammar accuracy 2. Close-ended questions	1. dependent sample t-test 2. Frequency 3. Pearson product moment correlation coefficient
2. How do the high school students engage with teacher written corrective feedback?	1. Interview protocol	1. Semi-structured interview protocol (focus group)	1. Content analysis

Table 4: Research questions, research instruments, and data analysis of the study

Summary

This chapter outlined the research design, the participants, the instruments, the data collection, and the data analyses. The study employed a mixed-method experimental design by having qualitative data before, during, and after the experiment. The participants were 26 students from Satri Si Suriyothai School. They were studying in Grade 10 and enrolled in English Reading-Writing. They were not in an English program. This study used five instruments: writing tests, a writing task, semi-structured interview protocols, an analytic scoring rubric for English writing grammar accuracy, and a questionnaire. Before the pre-test, 20 percent of the participants or five participants were randomly selected for a focus group interview. After the pre-test, the participants were assigned to do a writing task. When they submitted the second draft, they received indirect written corrective feedback from the researcher and edited the errors according to the feedback. When they finished error correction, they completed a questionnaire about their engagement with the feedback to reflect to what extent they engaged with the feedback behaviorally, affectively, and cognitively. Then, the five participants had a focus group interview before the post-test, and they had the last interview after the post-test as the last step. The data from the writing tests, the questionnaire, and the focus group interview were analyzed later

Chapter 4 is to present the results of the study according to the research procedures described in Chapter 3.

Chapter 4
Results

This chapter is to present the results of the study. It includes a review of the purpose of the study, followed by an overview of the data collection procedure. The results of analyses of the quantitative data and the qualitative data are provided in two sections:

1. The association between student engagement with teacher written corrective feedback and English writing grammar accuracy

2. The high school students' engagement with teacher written corrective feedback in the three dimensions: behavioral engagement, affective engagement, and cognitive engagement

The review of the purpose of the study

The purpose of the study was to examine the association between student engagement with teacher written corrective feedback and English writing grammar accuracy as the learning outcome and to explore how high school students engaged with the teacher written corrective feedback behaviorally, affectively, and cognitively. The underlying assumption was that how high school students engaged might be different from how university students did because of different individual differences and contextual factors.

The overview of the data collection procedure

The data collection procedure consisted of three phases. Before the data collection, 20 percent of the participants, or five participants, were randomly selected in order to be the representative of all the participants and avoid selecting the participants with bias. The first phase of the research was a qualitative data collection through a focus group interview to understand the five participants' past experience and attitudes towards English writing and teacher written corrective feedback. Then, the writing pre-test was administered to examine the participants'

English writing grammar accuracy and rated according to the analytic scoring rubric for English writing grammar accuracy.

In the second phase of the research, the participants did the writing task. Then, they received the indirect written corrective feedback by underlining the errors and providing the error code above them. After editing the errors, a focus group interview with the five participants was carried out to explore how they engaged with the teacher written corrective feedback behaviorally, affectively, and cognitively. After that, the questionnaire regarding student engagement with teacher written corrective feedback was administered to the participants before the third phase of the research.

In the third phase of the research, the participants had a writing post-test to examine the English writing grammar accuracy after they had engaged with the teacher written corrective feedback. The writing post-test were analyzed and evaluated according to the analytic scoring rubric for English writing grammar accuracy. After that, a focus group interview was carried out with the five participants to reflect on their engagement resulting in the English grammar writing accuracy in the writing post-test.

Results

1. The association between student engagement with teacher written corrective feedback and English writing grammar accuracy in a new piece of writing

In order to answer this research question, the results in this section are presented in four major sections: the questionnaire results, the writing test results, and the result of the correlation between English writing grammar accuracy and student engagement with teacher written corrective feedback, and the summary.

1.1 Questionnaire results

After the participants edited the errors and submitted the final draft, the questionnaire regarding student engagement in English writing grammar accuracy based on teacher written corrective feedback was distributed via the Google Form. All the participants submitted their responses.

The data from the questionnaires regarding student engagement in English writing grammar accuracy based on teacher written were counted based on the frequency and then converted into percentage as shown in Table 5 below.

Statement	Yes		No	
	N	Percent	N	Percent
Behavioral engagement				
1. I corrected all the errors rather than left them unmodified after receiving the teacher written corrective feedback.	21	80.77%	5	19.23%
2. I edited the errors identified with the teacher written corrective feedback on my own.	22	84.62%	4	15.38%
3. I took a break from revision in order that I would not feel too stressed.	15	57.69%	11	42.31%
4. I consulted my peers to help me understand the teacher written corrective feedback.	14	53.85%	12	46.15%
5. When I could not edit the errors according to the teacher written corrective feedback right away, I did not feel tense.	14	53.85%	12	46.15%
6. I used English textbooks or websites to help me understand the teacher written corrective feedback.	24	92.31%	2	7.69%
7. I looked up words in a dictionary to help me edit the errors according to the teacher written corrective feedback.	13	50%	13	50%
8. I learned grammar points which related to my errors in the text while editing them.	25	96.15%	1	3.85%

Table 5: Student engagement with teacher written corrective feedback in each dimension

Statement	Yes		No	
	N	Percent	N	Percent
Behavioral engagement				
9. I attended a teacher-student writing conference with my teacher out of the class.	11	42.31%	15	57.69%
10. I reviewed the errors before the test.	17	65.38%	9	34.62%
Affective engagement				
11. I thought accuracy in writing is as important as content.	24	92.31%	2	7.69%
12. I was fine when I received the teacher written corrective feedback.	25	96.15%	1	3.85%
13. I did not feel so upset that I could not pay attention to the errors in my text later after I received the teacher written corrective feedback.	23	88.46%	3	11.54%
14. I did not feel discouraged while correcting the errors identified with the teacher written corrective feedback.	17	65.38%	9	34.62%
15. I kept correcting the errors according to the teacher written corrective feedback because I was not afraid to make wrong corrections.	25	96.15%	1	3.85%
16. When I had negative emotions while correcting the errors, I could regulate them to encourage myself during revision.	24	92.31%	2	7.69%
17. I felt confident that my revision was correct after I had corrected the errors identified with the teacher written corrective feedback.	12	46.15%	14	53.85%
18. I valued teacher written corrective feedback to help me improve accuracy in writing.	26	100%	0	0%

Table 5: Student engagement with teacher written corrective feedback in each

dimension (Continue)

Statement	Yes		No	
	N	Percent	N	Percent
Affective engagement				
19. I trusted the teacher written corrective feedback I received so I edited the errors according to it without any doubt.	19	73.08%	7	26.92%
20. I had positive feelings towards the teacher written corrective feedback, so I put much effort to understand it.	24	92.31%	2	7.69%
Cognitive engagement				
21. I evaluated the effectiveness of the teacher written corrective feedback before editing the errors.	18	69.23%	8	30.77%
22. I planned how to correct the errors in my texts according to the teacher written corrective feedback.	23	88.46%	3	11.54%
23. I activated my previous knowledge of English grammar points related to the errors identified with the teacher written corrective feedback.	22	84.62%	4	15.38%
24. I evaluated whether my correction was accurate or not.	23	88.46%	3	11.54%
25. When I considered that the revision strategies which I had used for corrections earlier did not work well, I was not frustrated.	24	92.31%	2	7.69%
26. I was aware that my text had the errors which were identified with the teacher written corrective feedback on most occasion.	18	69.23%	8	30.77%
27. I could recognize the teacher's corrective intention of every error most of the time.	19	73.08%	7	26.92%

Table 5: Student engagement with teacher written corrective feedback in each

dimension (Continue)

Statement	Yes		No	
	N	Percent	N	Percent
Cognitive engagement				
28. I could diagnose each of the errors according to the teacher written corrective feedback on most occasions.	18	69.23%	8	30.77%
29. When I could analyze the errors according to the teacher written corrective feedback, I felt happy.	23	88.46%	3	11.54%
30. I corrected the errors identified with the teacher written corrective feedback which I could understand more before I corrected the errors with the one that I could understand less.	26	100%	0	0%

Table 5: Student engagement with teacher written corrective feedback in each dimension (Continue)

According to Table 5, the first ten statements were about behavioral engagement. The leading behavioral engagement by the participants was "I learned grammar points which related to my errors in the text while editing them" (N =25). Then it was followed by "I used English textbooks or websites to help me understand the teacher written corrective feedback" (N = 24), "I edited the errors identified with the teacher written corrective feedback on my own" (N = 22), and "I corrected all the errors rather than left them unmodified after receiving the teacher written corrective feedback" (N = 21).

The statements from Number 11 to 20 were about affective engagement. The dominant affective engagement, according to Table 5, was "I valued teacher written corrective feedback to help me improve accuracy in writing" (N = 26), followed by "I was fine when I received the teacher written corrective feedback" (N = 25), "I kept correcting the errors according to the teacher written corrective feedback because I was not afraid to make wrong

corrections" (N = 25), "I thought accuracy in writing is as important as content" (N = 24), "When I had negative emotions while correcting the errors, I could regulate them to encourage myself during revision" (N = 24), "I had positive feelings towards the teacher written corrective feedback, so I put much efforts to understand it" (N = 24), and "I did not feel so upset that I could not pay attention to the errors in my text later after I received the teacher written corrective feedback" (N = 23).

The last ten statements were concerned with cognitive engagement. The most outstanding cognitive engagement, according to Table 5, was "I corrected the errors identified with the teacher written corrective feedback which I could understand more before I corrected the errors with the one that I could understand less" (N = 26). Then, it was followed by "When I considered that the revision strategies which I had used for corrections earlier did not work well, I was not frustrated" (N = 24), "I planned how to correct the errors in my texts according to the teacher written corrective feedback" (N = 23), "I evaluated whether my correction was accurate or not" (N = 23), "When I could analyze the errors according to the teacher written corrective feedback, I felt happy" (N = 23), and "I activated my previous knowledge of English grammar points related to the errors identified with the teacher written corrective feedback" (N = 22).

Overall, 17 statements out of 30 (56.67%) showed how more than 80 percent of the participants engaged with the teacher written corrective feedback. The results from the questionnaire did not aim to order the particular ways of student engagement with teacher written corrective feedback in terms of the importance but to identify what more than 80 percent of the participants did as their engagement with the feedback in each dimension as they were summarized in Table 6.

Engagement	N	Percent
Behavioral engagement		
I learned grammar points which related to my errors in the text while editing them.	25	96.15%
I used English textbooks or websites to help me understand the teacher written corrective feedback.	24	92.31%
I edited the errors identified with the teacher written corrective feedback on my own.	22	84.62%
I corrected all the errors rather than left them unmodified after receiving the teacher written corrective feedback.	21	80.77%
Affective engagement		
I valued teacher written corrective feedback to help me improve accuracy in writing	26	100%
I was fine when I received the teacher written corrective feedback	25	96.15%
I kept correcting the errors according to the teacher written corrective feedback because I was not afraid to make wrong corrections	25	96.15%
I thought accuracy in writing is as important as content.	24	92.31%
When I had negative emotions while correcting the errors, I could regulate them to encourage myself during revision.	24	92.31%
I had positive feelings towards the teacher written corrective feedback, so I put much efforts to understand it	24	92.31%
I did not feel so upset that I could not pay attention to the errors in my text later after I received the teacher written corrective feedback	23	88.46%

Table 6: Summary of student engagement with teacher written corrective feedback by more than 80 percent of the participants

Engagement	N	Percent
Cognitive engagement		
I corrected the errors identified with the teacher written corrective feedback which I could understand more before I corrected the errors with the one that I could understand less.	26	100%
When I considered that the revision strategies which I had used for corrections earlier did not work well, I was not frustrated.	24	92.31%
I planned how to correct the errors in my texts according to the teacher written corrective feedback.	23	88.46%
I evaluated whether my correction was accurate or not.	23	88.46%
When I could analyze the errors according to the teacher written corrective feedback, I felt happy	23	88.46%
I activated my previous knowledge of English grammar points related to the errors identified with the teacher written corrective feedback	22	84.62%

Table 6: Summary of student engagement with teacher written corrective feedback

by more than 80 percent of the participants (Continue)

1.2 The result of the correlation between English writing grammar accuracy and student engagement with teacher written corrective feedback

The engagement score was the independent variable, while the English writing grammar accuracy score was the dependent variable because it was the learning outcome resulting from their student engagement with teacher written corrective feedback. Both variables were compared and analyzed through Pearson product-moment correlation to determine how student engagement with teacher written corrective feedback and English writing grammar accuracy were related. The result is presented in Table 7.

		Student engagement with teacher written corrective feedback
English writing grammar accuracy (Post-test)	Pearson Correlation	-.089
	Sig. (2-tailed)	.667
	N	26

Table 7: The correlation of English writing grammar accuracy and student engagement with teacher written corrective feedback

Based on Table 7, the correlation score was *r* = -0.089, *p* = .667, indicating that student engagement with teacher written corrective feedback and English writing grammar accuracy were not related because the correlation coefficient is around 0.00 (Mills & Gay, 2019).

1.3 Summary of the quantitative results

According to the findings of the correlation of English writing grammar accuracy and student engagement with teacher written corrective feedback, there was no association between both variables. Although the relationship was not found, interestingly, the participants' English writing grammar accuracy was significantly improved. Regarding the responses based on the questionnaire, more than 80 percent of them engaged with the feedback in accordance with 17 statements out of the 30 statements from the questionnaire.

2. The high school students' engagement with teacher written corrective feedback in the three dimensions: behavioral engagement, affective engagement, and cognitive engagement

In order to answer this research question, the results in this section are presented in four major sections: students' behavioral engagement, students' affective engagement, students' cognitive engagement and the summary.

2.1 Students' behavioral engagement

The participants' responses about their behavioral engagement with teacher written corrective feedback could be analyzed into three themes: revision strategies, observable strategies for correcting errors, and the interrelationship of behavioral engagement and other types of student engagement

2.1.1 Revision strategies

How the participants corrected their errors could be examined in their draft as presented in Table 9.

Based on Table 9, it is clear that the five participants could correct most of their errors successfully. Participant 1, 2, and 4 made a few incorrect corrections by incorrect revision and no change. Interestingly, Participant 4 made new errors after the correct revision according to the feedback. The new errors which she made were in different categories than her initial errors. For example, before revision, the original sentence had an error in terms of sentence structure (parallel structure). She could correct the sentence structure error by adding the same verb "speak," but she made two new errors in subject-verb agreements by not adding an s after the verb:

Original: She speaks eloquently, speaks quickly and clearly.

Revision: She speaks eloquently, speak clearly, and speak quickly.

Participants	Second drafts Total number of errors	Final drafts Total number of errors	Revision Strategies
Participant 1	22	3	Correct revision: 19 Incorrect revision: 2 No change: 1
Participant 2	18	1	Correct revision: 16 Substitution (Correct): 1 No change: 1
Participant 3	12	0	Correct revision: 11 Substitution (Correct): 1
Participant 4	14	4*	Correct revision: 13 Incorrect revision: 1
Participant 5	11	0	Correct revision: 11
*Note: including new errors after correct revision			

Table 8: Summary of errors in the five participants' second and final draft and their use of revision strategies

In order to understand the five participants' use of revision strategies, the focus group interview was carried out to further investigate why they used the particular revision strategies. The participants' responses regarding behavioral engagement in terms of revision strategies showed that they could make correct revision because they understood the written corrective feedback. One participant explained:

> *"I understood it [the error] when the teacher [researcher] gave a hint that the two sentences were combined with a comma."* (Participant 4)

The other four participants also agreed that they understood the given feedback so that they could correct errors accurately. Another participant further explained that some of the error codes were easy to understand.

> *"Sometimes, when I saw some codes, I knew what was wrong in my sentence right away. For example, when I saw this SV [Subject-Verb agreement], and then I checked and realized that the subject was a singular noun, I knew that I forgot to add an s after a verb."* (Participant 3)

The other participant shared a similar response like Participant 3 but shared further details that some errors were easy to correct because they were not complex.

> *"I have the same opinion like [Participant 3]. Some errors were not difficult to correct because the way to correct them was obvious. For example, when I got an SP [Singular-Plural], I just added an s to the noun to make it a plural noun."* (Participant 5)

Regarding the incorrect revision, the two participants (Participant 1 and 4) explained that they did not understand what was wrong and could not find a way to correct the errors although they knew what the error codes referred to.

> *"Actually, I had trouble to correct it [SS or Sentence Structure] because I didn't know what the error was about. I tried my best to correct it, but it was still incorrect."* (Participant 2)

> *"When I got an SS [Sentence Structure], I knew what it referred to, but I didn't know what it was exactly and how to correct it. So, I corrected the error by my instinct."* (Participant 4)

For substitution, the two participants (Participant 2 and 3) reported the different reason for the use of substitution even though it eventually led to the correct revision. One participant reported she found an example sentence on a website, so she modified the sentence according to it.

> *"While trying to correct the error [SS or Sentence Structure], I found a sentence on a website, and I thought it was a good way to correct my sentence. So, I changed the sentence like that one [the example sentence]."* (Participant 2)

The other participant explained that she was concerned that the sentence would be hard to read after the revision even though she understood the feedback. Therefore, she rearranged the sentence.

> *"I knew what it [the feedback] referred to, but I think the sentence would be complex after I corrected according to the feedback. So, I just rearranged the sentence."* (Participant 3)

For no changes, the two participants revealed their use of no change in a different way. One participant reported that she forgot to correct one of the errors because she was careless. The other participant insisted that it was already correct. However, her misunderstanding about the error resulted in not correcting the error.

> *"**Participant 2:** I think this error [Article] wasn't wrong because it was a plural noun [glasses], so I didn't use an article.*
>
> ***Researcher:** You have mentioned "glasses" already, right? ((the researcher using a mouse cursor at the word "glasses" where it was first mentioned)). And you write the word "glasses" again. When the noun is mentioned for the second time, which article should we use?*

> *Participant 2: The?*
>
> *Researcher: That's correct. So, you know it [about using the article "the" for the noun mentioned earlier], right?*
>
> *Participant 2: I think we don't use "the" with a plural noun."*

According to the responses, it can be seen that correct revision is a result of understanding the feedback. Their responses also revealed that the feedback for some error categories were easier to understand than the others, resulting in correct revision. Incorrect revision and no change are caused by not understanding the feedback.

2.1.2 Observable strategies for correcting errors

Their responses revealed that most participants had similar strategies to help them correct the errors. They indicated that searching the internet for grammatical points related to the errors, comparing example sentences with their sentences, and consulting with the researcher and their friends about some difficult errors were their strategies to help them correct the errors. Most of them explained they accessed the website provided by the researcher earlier because they found it very informative. They consulted with their friend and the researcher at the teacher-student writing conference once they finished correcting the errors by themselves. One student described the strategies this way:

> *"At first, I searched the internet, and when I didn't know how to correct some difficult errors, I asked my friend for help. Then I corrected the errors, and I consulted with you [the researcher] later to check my correction."* (Participant 4)

However, there was one participant who did not ask for help from their friends but only consulted with the researcher.

> *"I did like what the others said, but I didn't consult with my friends. If I had the errors that were too difficult for me, I waited to ask you [the researcher] later."* (Participant 2)

Based on their responses, the participants tended to search information on websites and attend the writing conferences to help them correct their errors. These strategies may help them gain more understanding of the feedback.

2.1.3 Interrelationship of behavioral engagement and other types of student engagement

Regarding the interrelationship between behavioral engagement and cognitive engagement, all participants reported that searching information on a website and consulting with the friends and teacher were the strategies to help them understand the feedback.

> *"When I didn't understand the errors, I surfed the internet and looked into their explanation to help me understand the errors."* (Participant 2)
>
> *"I could correct difficult errors when you [the researcher] explained the feedback to me."* (Participant 3)

For the interrelationship between behavioral engagement and affective engagement, most the participants reported they felt happy and proud of themselves when they reread the edited sentences after the correction and found them smooth. One participant described her feelings after the error correction:

"I felt very happy that I could correct the errors. When I reread the [corrected] sentences again, I felt that they were just right to me." (Participant 5).

Other participants also agree with Participant 5 except Participant 1 who reported that she did not feel anything in particular because she perceived error correction as a task. She described how she was indifferent after correcting the error this way:

"I see it [error correction] as work to be done. I didn't feel anything in particular." (Participant 1)

It can be seen that these responses displayed the relationship between the behavioral engagement and other types of student engagement with teacher written corrective feedback. The behavioral engagement can help the participants gain more understanding by searching information on websites and consulting with the teacher. In addition, they tend to have positive feelings such as pride and relief after correcting the errors.

2.2 Students' affective engagement

The participants' responses about their affective engagement with teacher written corrective feedback could be analyzed into three themes: emotional reactions, attitudes towards the feedback, and the interrelationship of affective engagement and other types of student engagement

2.2.1 Emotional reactions

The participants' responses about their emotional reactions to the teacher written corrective feedback were varied. Two participants reported that they felt surprised as soon as they saw the feedback.

"When I saw a lot of [error] codes on my work, I felt surprised. I didn't think that I made a lot of errors.' (Participant 1)

> *"I was surprised when I saw a long line under many sentences, and some sentences had two or three layers of lines and error codes in the same sentence. I had already checked for accuracy before submitting the [second] draft, so I didn't think that I would get the feedback like this, hhh"* (Participant 3)

In contrast, one participant reported that she did not feel surprised because she had not checked for accuracy.

> *"For me, I didn't feel surprised. I know that I hadn't checked grammatical errors earlier. […]"* (Participant 5)

Another participant reported she was slightly confused when she saw the feedback. She explained:

> *"For me, I exclaimed like, 'what is this?' And I didn't know what to do for a while."* (Participant 4)

The other participant felt disappointed in herself when she saw the feedback. She described her disappointment in this way:

> *"As soon as I saw the feedback, I felt that I shouldn't have made these mistakes."* (Participant 5).

According to these responses, most emotional reactions found to be negative feelings, which are surprise, confusion, and disappointment, when the participants saw the feedback.

2.2.2 Attitudes towards the feedback

For the participants' attitudes towards the teacher written corrective feedback, all the participants reported that they had good attitudes towards it.

> *"I liked it [the feedback] because it was specific and easy to see."* (Participant 1)

"What I liked about the feedback is that it guided me to search more information about what was wrong about the errors." (Participant 4)

"It's good. It didn't tell me too broad that I couldn't understand it, and it wasn't too specific that I didn't try to think on my own." (Participant 5)

Based on these responses, it can be seen that the participants considered the teacher written corrective feedback good for them. They saw the feedback as a tool to help them learn more about the errors.

2.2.3 Interrelationship of affective engagement and other types of student engagement

As for the interrelationship between affective engagement and behavioral engagement, four participants reported that they did not feel they wanted to correct them right away because they felt that they were not ready and wanted to have a rest before correcting the errors.

"I didn't feel like I wanted to do it [correcting the errors] right away. So, I relaxed shortly and corrected the errors." (Participant 3)

"As soon as I received the feedback, I turned off the phone and had some rest before correcting the errors." (Participant 4)

Some participants further explained that they only looked the error codes they got quickly in order to get an overview of the feedback.

"I just looked at the feedback quickly to see what my errors were. Then, I corrected the errors later when I felt more ready." (Participant 1)

"I didn't correct the errors immediately. I only skimmed through the error codes in the text." (Participant 5)

However, there was one participant who reported that she felt ready to correct her errors as soon as she received the feedback. She explained in this way:

"I happened to be in a mood to do homework, so I corrected the errors immediately when I received the feedback from you [the researcher]." (Participant 2)

The five participants' responses showed that most participants tried to prepare themselves to be ready for the error correction by having a rest. Regarding the relationship between affective engagement and cognitive engagement, the three participants reported that they did not find their errors difficult to correct because the feedback they got was easy and some of the feedback were the same.

"I think the errors were not that hard to be corrected because I didn't write anything complex." (Participant 1)

"No, I didn't think the feedback was difficult for me because I got many repetitive error codes and they were short." (Participant 2)

"I also think that my errors were easy like [Participant 2] said." (Participant 5)

However, the other two participants reported that they thought their errors were difficult to deal with. One of them explained that she saw many long-underlined sentences, so she thought her errors were difficult to deal with.

"For me, I thought the errors would be very hard because I saw many sentences were all underlined." (Participant 4)

The other participant responded similarly but pointed out a different aspect of the feedback.

"I got many layers of error codes in many sentences so I felt like this [the error correction] was not easy for me." (Participant 2)

Based on the responses, the affective engagement was found to have an influence for the participants to correct the errors immediately or later. The participants tend to make themselves ready before making revisions by relaxing. Moreover, the affective engagement also influences how they considered the difficulty the feedback.

2.3 Students' cognitive engagement

The participants' responses about their cognitive engagement with teacher written corrective feedback could be analyzed into three themes: levels of understandings, cognitive and metacognitive strategies, and the interrelationship of cognitive engagement and other types of student engagement

2.3.1 Levels of understanding

All participants reported there were some types of errors that they could totally, partially, and not understand. The participants could correct some errors when they totally understood them. If they partially understood the errors, they sought more clarification of the errors before correcting them. When they did not understand what the error was specifically about, they only knew its type because of the error code.

"When I saw the VT [Verb Tense], I understood that the tense was wrong. [...] For the Art [Article], I knew that there was an error about the article when I checked the feedback guideline, but I didn't know what was wrong with it. For the F [Fragments], I only knew that the sentence had a problem, but I didn't know what it was." (Participant 1)

"When I saw this SV [Subject-Verb Agreement] and reread the sentence, I realized that I forgot to add an s, something like that. For Art [Article], I only knew this sentence had a problem about an article, but I wasn't sure what it was about. Umm, and I didn't understand this Pro [Pronoun] at first." (Participant 2)

"I understood the Pro [Pronoun]. I used 'You' incorrectly. And I know this F [Fragment] for 'Play my best friend' because I felt that the sentence isn't complete, but I didn't understand this F for 'keep promises and keep words' [missing subject]. I was confused at SS [Sentence Structure]." (Participant 4)

Based on their responses, it can be seen that understanding the feedback can help the participants identify the errors and know how to correct them. When they have partial understanding of the feedback, they may not be able to figure out a way for correcting the errors even though they may be able to identify them. In addition, the participants fail to understand the feedback, they cannot both identify and correct the errors.

2.3.2 Cognitive and metacognitive strategies

The responses from the five participants revealed that they used some metacognitive and cognitive strategies to help them gain

more understanding of the teacher written corrective feedback. For cognitive strategies, two of them reported that they compared their sentences with some example sentences to help them see the differences in order to understand the feedback more.

> *"I looked at my sentence and compared it with a sentence that I found on websites. Then, I tried to understand the feedback from it [the comparison]."* (Participant 2)

> *"When I didn't know what the error was about, I tried to find its explanation on many websites. When I saw some examples, I tried to see the differences between my sentences and the example sentences. And it helped me understand the feedback a lot."* (Participant 3)

The other participants reported they tried to recalled what they knew about the errors while correcting them. Then they searched information on websites later.

> *"I tried to correct the errors that I felt I may know about them. Then, when I had some feedback that I couldn't understand, I searched some information about it on Google."* (Participant 1)

> *"I tried to think of what I knew about the errors while correcting them. If I didn't know how to correct them, I surfed the internet."* (Participant 4)

Regarding metacognitive strategies, all the participants reported that they evaluated their corrections by attending the teacher-student writing conference to confirm whether they understood the feedback or not.

> *"I decided to meet the teacher [the researcher] to help me confirm whether I understood the feedback or not."* (Participant 2)
>
> *"Like [Participant 2], there were some errors that I wasn't sure if I could understand the feedback correctly, so I thought I should ask you [the researcher]."* (Participant 5)

Their responses revealed their use of cognitive and metacognitive strategies. The participants tried to understand the feedback by comparing their sentences with correct example sentences from websites and activating their previous knowledge. Then, they monitored their understanding of the feedback by attending the student-teacher writing conference.

2.3.3 Interrelationship of cognitive engagement and other types of student engagement

Concerning the interrelationship between cognitive engagement and behavioral engagement, all the participants reported that they dealt with the others that they could partially or not understand the errors by searching for grammatical explanations related to the errors on websites and consulting with the researcher at a teacher-student writing conference to seek more clarification of the errors or confirm the error corrections. One participant explained in this way:

> *"I corrected the errors that I understood most first. And for some errors that I didn't understand or understood a little bit, I searched for the information on websites to help me understand the feedback. If I still couldn't understand it, I waited to ask you [the researcher]."* (Participant 3)

The other participants also responded similarly and agreed with Participant 3. For the relationship between cognitive engagement and affective engagement, all the participants revealed that they had slight stress while trying to understand the feedback.

> *"I was kind of stressed when I found myself confused about the feedback and couldn't correct errors."* (Participant 1)

> *"I felt slightly stressed, like when I didn't know how to correct the errors."* (Participant 3)

One participant added that she did not feel stressed all the time during making the revision because she knew that she could ask others later.

> *"I felt stressed like others, but it wasn't that long. I thought that I could ask my friends or you [the researcher] later."* (Participant 2)

Based on their responses, it can be seen that the participants prioritize the errors based on their understanding as planning for the error corrections. The participants revealed that they were a little stressed while trying to understand the errors from the feedback.

The findings for second research question showed how secondary students engaged with the feedback behaviorally, affectively, and cognitively as summarized in Table 9.

Types of student engagement	Aspect	Actions
Behavioral engagement	Correct revision	- consulting with a teacher - searching for information on websites - following the requirement
	Incorrect revision	- correcting without understanding
	Observable strategies for correcting errors	- searching for information on websites for correcting errors - comparing example sentences with one's sentences - consulting with their teacher and friends for correcting errors
	Interrelationship of behavioral engagement and affective engagement	- relief - proud
	Interrelationship of behavioral engagement and cognitive engagement	- comparing example sentences with one's sentences - consulting with their teachers and friends
Affective engagement	Emotional reactions	- surprise - shock
	Attitudes towards the feedback	- positive attitudes
	Interrelationship of affective engagement and behavioral engagement	- preparing oneself to be ready

Table 9: Secondary students' engagement with teacher written corrective feedback

Types of student engagement	Aspect	Actions
Affective engagement	Interrelationship of affective engagement and cognitive engagement	- judging the difficulty of the feedback
Cognitive engagement	Levels of understanding	- having total, partial, and no understanding
	Cognitive and metacognitive strategies	- comparing their sentences with example sentences from websites for understanding - activating their previous knowledge. - monitoring their understanding of the feedback
	Interrelationship of cognitive engagement and behavioral engagement	- searching for information on websites for more understanding - consulting with their teacher and friends for more understanding
	Interrelationship of cognitive engagement and affective engagement	- feeling slightly negative

Table 9: Secondary students' engagement with teacher written corrective feedback

(Continue)

Summary

The chapter contains a review of the purpose of the study and an overview of the data collection procedure. The results for the first research question were organized by presenting the quantitative data from the questionnaire, the writing tests, and the correlation between student engagement with teacher written corrective feedback and English writing grammar accuracy. In the case of the correlation between student engagement with teacher written corrective feedback and English writing grammar accuracy, both variables were not related to each other. Then it is followed by the analysis of the focus group responses was organized by grouping the responses based on the types of student engagement with teacher written corrective feedback to answer the second research question.

The findings in this chapter did not serve to establish a theory of student engagement with teacher written corrective feedback but to examine whether the relationship between student engagement with teacher written corrective feedback and English writing grammar accuracy existed or not and to explore the nature of high school students' engagement with the feedback. The findings were discussed in Chapter 5 with reference to the literature related to the theories and previous studies relevant to the three types of student engagement with teacher written corrective feedback.

Chapter 5 is divided into several sections. The first section is a reintroduction of the study. Next, the association between student engagement with teacher written corrective feedback and English writing grammar accuracy was discussed according to the theories in the literature review and student engagement with the feedback was discussed based on the three types: behavioral engagement, affective engagement, and cognitive engagement. Next, it was followed by overall findings and conclusions. Finally, a discussion of implication of findings and recommendations for further study were made.

Chapter 5

Discussion

The purpose of the study was to examine the association between student engagement with teacher written corrective feedback and English writing grammar accuracy and explore how high school students engage with the feedback behaviorally, affectively, and cognitively. The aim of the study was to discern the relationship between student engagement with teacher written corrective feedback and English writing grammar accuracy and shed new light on high school students' engagement with the feedback.

The mixed-method experimental design was used to examine to what extent student engagement with teacher written corrective feedback contributed to the participants' English writing grammar accuracy by correlating the scores of student engagement with teacher written corrective feedback from the questionnaire and the difference scores between the writing pre-test and the writing post-test. The scores were rated according to the analytic rubric score of English writing grammar accuracy. The qualitative data from the focus group interview was carried out to explore how the participants engaged with the feedback behaviorally, affectively, and cognitively, the focus group interview.

In this chapter, the discussions of the research findings are presented in many sections. First, a summary of each research question's findings was provided. Next, the discussions according to the research question were made. Finally, a discussion of the teaching implication of the findings, limitations of the study, and recommendations for further study were presented.

Summary of the research findings

The research findings were summarized and presented based on the research questions.

1. How is student engagement with teacher written corrective feedback related to English writing grammar accuracy?

The result of the correlation between student engagement with teacher written corrective feedback was found that both variables were not related to each other.

The result based on the questionnaire regarding student engagement with teacher written corrective feedback showed that more than 80 percent of the participants engaged the feedback according to 17 statements out of 30. "I learned grammar points which related to my errors in the text while editing them" was the leading statement for behavioral engagement. Regarding the affective engagement, all the participants agreed with, "I valued teacher written corrective feedback to help me improve accuracy in writing." For cognitive engagement, "I corrected the errors identified with the teacher written corrective feedback which I could understand more before I corrected the errors with the one that I could understand less" was the top statement for every participant.

2. How do students engage with teacher written corrective feedback behaviorally, affectively, and cognitively?

Results from the focus group interviews showed that student engagement with teacher written corrective feedback could make the participants correct the errors accurately most of the time. Moreover, each type of student engagement with the feedback influenced other dimensions of the student engagement. According to their responses, how the participants engaged with the teacher written corrective feedback was not much varied. Searching for information about the errors on the internet and consulting with a teacher were all the participants' behavioral engagement with the feedback to help them edit the errors. When they had negative feelings, they stopped to relax for a while before continuing to make a revision. After the revision, they felt relieved and proud of themselves to be able to correct the errors. For cognitive engagement, the responses revealed that the participants had three levels of understanding: total, partial, and no understanding. While they were searching for the explanation about the

errors on websites, the participants gained more understanding by comparing their sentence with examples sentences on websites and attending student-teacher writing conference. They prioritized the errors by correcting the ones that they understood first, and they all reported that they had slightly stress while trying to understand the feedback. Finally, regarding their affective engagement, most participants expressed their negative emotional reactions as soon as they saw the teacher written corrective feedback. However, they regulated their negative emotional reactions by relaxing themselves to be ready before making revisions, and they took a short a break when they felt stressed while trying to understand the feedback.

Discussion

This section presents the discussions that were divided into two parts according to the research questions. The relevant literature was used for references where appropriate in each section.

1. The association between student engagement with teacher written corrective feedback and English writing grammar accuracy

According to the hypothesis of the research, the result from Pearson product-moment coefficient in Table 7 revealed that the relationship between student engagement with teacher written corrective feedback and English writing grammar accuracy did not exist between them. Therefore, the null hypothesis cannot be rejected, and the alternative hypothesis cannot be accepted.

Based on the outcome of the study, it could be interpreted that student engagement with teacher written corrective feedback may not relate English writing grammar accuracy in view of second language acquisition. The findings may not support Han and Hyland (2015) in view of second language acquisition because their findings suggested that the higher student engagement with the feedback is, the more correct revisions students can make. Their findings reflected second language improvement rather than second language acquisition. Being able to make a lot of correct revisions

from one draft to another draft may not indicate how accurate English writing grammar accuracy in a new piece of writing is, according to the result of the study. There might be other factors that may affect student engagement with the feedback such as individual difference factors and contextual factors as Ellis (2010) noted.

The relationship between student engagement with the feedback and English writing grammar accuracy may be partly explained by language proficiency as an individual difference factor mediating student engagement with the feedback. It might be possible that some participants who had high English proficiency could correct most errors without having to extensively engage with the feedback, and they can write more accurately. In contrast, the participants with low English proficiency may be able to make a lot of error corrections due to their high degree of student engagement, but they still had trouble to write English accurately. It could be that their engagement may not make them to have solid linguistic knowledge immediately since low proficient students had have less linguistic knowledge than higher proficient ones (Zheng & Yu, 2018).

Another possible explanation that might affect the relationship is the feedback provision in terms of the teacher practice as contextual context where the participants learnt English writing. Using indirect written corrective feedback may cause the participants not to understand the feedback thoroughly, which was consistent with Zheng and Yu (2018) who found that providing students with indirect feedback made them confused. When the participants did not understand the feedback, they might not have learnt anything much.

2. The high school student engagement with teacher written corrective feedback in the three dimensions

This section was divided into three themes according to the three types of student engagement with teacher written corrective feedback: behavioral engagement, affective engagement, and cognitive engagement.

Then, each theme was further discussed about the interrelationship of each type of student engagement with the feedback.

2.1 Behavioral engagement

A review of literature for the behavioral engagement with written corrective feedback revealed that the behavioral engagement was concerned with revision strategies and observable strategies to help students edit the errors according to the feedback. The discussion of the behavioral engagement with teacher written corrective feedback was presented in three sections: the participants' revision strategies, their observable strategies, and the interrelationship of the behavioral engagement with other types of student engagement.

2.1.1 The participants' revision strategies

Based on the findings, the participants corrected the errors accurately and inaccurately, indicating that student engagement with teacher written corrective feedback may not always lead to successful error corrections since there are other factors such as individual difference factors and contextual factors mediating student engagement with the feedback. For the correct revision, searching for information on websites and consulting with a teacher likely helped them to understand the feedback and eventually correct the errors accurately.

> *"I understood it [the error] when the teacher [researcher] gave a hint that the two sentences were combined with a comma."* (Participant 4)

However, the participants may not have searched for information about every error. Some responses showed that some error codes and some error categories were easy to understand and correct for the participants.

> *"Sometimes, when I saw some codes, I knew what was wrong in my sentence right away. For example, when I*

saw this SV [Subject-Verb agreement], and then I checked and realized that the subject was a singular noun, I knew that I forgot to add an s after a verb." (Participant 3)

"I have the same opinion like [Participant 3]. Some errors were not difficult to correct because the way to correct them was obvious. For example, when I got an SP [Singular-Plural], I just added an s to the noun to make it a plural noun." (Participant 5)

According to these three responses, it could be assumed that understanding the feedback can make the participants analyze the errors and know how to correct the errors successfully. In addition, the reason why the participants did not delete errors as a strategy for error corrections could be assumed that the writing task requirements such as word count forced them not to delete the errors to meet such requirements according to the participants' responses. Therefore, setting a requirement for the writing task may affect the participants' behavioral engagement with the feedback.

For the incorrect revision, it was reported that incorrect revision resulted from not being able to analyze and understand the feedback.

"When I got an SS [Sentence Structure], I knew what it referred to, but I didn't know what it was exactly and how to correct it. So, I corrected the error by my instinct." (Participant 4)

The responses in this section may reflect some of the stages in the cognitive-processing stages for a single written corrective feedback episode (Bitchener, 2019) (see Figure 3). According to Bitchener (2019), "understanding written corrective feedback input" and "analyzing or comparing written corrective feedback input with long-term memory knowledge" are the important stages that affect the decision of what

revision strategy should be used for accurate error corrections. Being able to correct errors based on teacher written corrective feedback may reflect that the participants understood and analyzed the errors correctly. It is consistent with Zheng and Yu (2018) who also found that understanding determined the students' decision for error correction. However, since the findings found that there were a few times when some participants chose substitution rather than correct revision according to the teacher written corrective feedback, there might have been other variables making them engage with the feedback more than for improving grammatical accuracy in the text as one participant reported she was concerned for the readability of the sentence. The degree of engagement with feedback between correct revision according to the feedback and substitution might be different to some extent because the former tended to be error corrections at a word level, whereas the latter tended to make changes bigger than at the word level. Nevertheless, the case could be explained that the feedback emphasized on the accuracy, so the participants did not focus on making changes that were beyond word levels as Zheng and Yu (2018) pointed out.

2.1.2 The participants' observable strategies

It was found that searching for grammatical points related to the errors on websites and consulting a teacher or a friend were the participants' strategies to help them edit the errors and understand the feedback. In addition, the results from the questionnaire in Table 6 also found that using resources such as textbooks or websites was the strategy that 92.31% of participants used for the behavioral engagement with the feedback, which could confirm that searching for information on websites was the strategy used by high school students. However, there were only 53.85% of participants who consulted their peers to help them understand the teacher written

corrective feedback and 42.31% of participants who attended a teacher-student writing conference with the researcher out of the class.

Moreover, learning grammatical points relevant to the errors identified with teacher written corrective feedback was found to be the way 96.15% of participants engaged with the feedback behaviorally. This could be explained that the participants may have become aware of what they needed to learn about the errors thanks to the feedback. This kind of learning could be intentional learning, according to Schmidt (1990) since the feedback raised the participants' awareness to focus on what they had to learn to improve their English writing grammar accuracy. The other notable behavioral engagement from the questionnaire was that most participants edited the errors according to the feedback on their own (84.62%) and corrected all the errors rather than left them unmodified (80.77%), which may indicate that most of the participants highly had the behavioral engagement in terms of self-editing. It was possible that receiving indirect written corrective feedback made them need to engage with the feedback as an activity for "guided learning and problem-solving," according to Lalande (1982, p. 143).

2.1.3 The influence of the behavioral engagement on cognition and feelings

The behavioral engagement affected other types of student engagement with teacher written corrective feedback. Comparing a correct sentence with the participants' sentences and consulting with a teacher or friends might reflect the participants' cognition which was influenced by their behavioral engagement. The two strategies may reflect the cognitive and metacognitive strategies based on Oxford (2017). Based on the strategies for metacognitive and cognitive strategies in Table 3, comparing a correct sentence on a website with

their sentence could be categorized as "conceptualizing with details" in cognitive strategies, and consulting with a teacher or friends may be classified into "planning for cognition' in metacognitive strategy. It could be assumed that if a website provided examples of correct and incorrect sentences related to the participants' errors, they might use the former strategy to help them edit the errors and even understand the feedback. However, if the website did not help them edit their errors, they may plan to consult with a teacher or friends to help them edit the errors. Examples of such strategies are:

> "At first, I searched the internet, and when I didn't know how to correct some difficult errors, I asked my friend for help. Then I corrected the errors, and I consulted with you [the researcher] later to check my correction." (Participant 4)

> "I did like what the others said, but I didn't consult with my friends. If I had the errors that were too difficult for me, I waited to ask you [the researcher] later." (Participant 2)

This is also found in Han and Hyland (2015) who found one participant who highly engaged with the feedback attended the writing conferences to consult and seek more clarification.

For the influence of behavioral engagement on feelings, unsurprisingly, most participants expressed their relief and pride in themselves after the error corrections. It could be assumed that they may have had some trouble or difficulty while correcting their errors according to the teacher written corrective feedback. However, it was unexpected to find that one participant did not feel anything like the other participants. There might be other factors that made her have a particular view of error corrections.

2.2 Affective engagement

The discussion of affective engagement is presented in two sections: the participants' affective engagement and the influence of the affective engagement on behavior and cognition.

2.2.1 The participants' affective engagement

Most participants' emotional reactions were surprise and shock as soon as they received the teacher written corrective feedback. According to one participant, their surprise and shock could result from receiving the feedback, which was beyond their expectation.

> "I was surprised when I saw a long line under many sentences, and some sentences had two or three layers of lines and error codes in the same sentence. I had already checked for accuracy before submitting the [second] draft, so I didn't think that I got the feedback like this, hhh" (Participant 3)

Based on the response, it could be possible that the feedback focused on a lot of error categories and was provided by labeling the errors with error codes as well as lines, so the participants were astonished. In addition, this finding was partially consistent with that of Mahfoodh (2017) who found that direct coded made the student feel surprised. However, the results of the questionnaire in Table 5 reported that all the participants (100%) valued teacher written corrective feedback to help them improve their accuracy in writing, and almost all participants (96.15%) were fine when they received teacher written corrective feedback. The contradiction could be explained that all the participants had good attitudes towards teacher's feedback so that the feedback was acceptable.

The other dominant affective engagement reported in the questionnaire by more than 80 percent of participants was that most participants (92.31%) thought accuracy was as important as content. Based on this result, since they had good attitudes towards accuracy,

according to Bitchener (2019), they may have high motivation and orientation to accuracy so that they are ready to pay attention to written corrective feedback. They might have paid less attention to the teacher written corrective feedback if they had perceived content as a more important aspect than accuracy. Therefore, having good attitudes towards written corrective feedback could be necessary to learn from the feedback.

2.2.2 The influence of the affective engagement on behavior and cognitive

According to the participants' responses, affective engagement was found to influence other types of student engagement with teacher written corrective feedback. For the influence of the affective engagement on behavior, it was reported by most of the participants that they did not feel ready to correct the errors as soon as they received the teacher written corrective feedback, so they had a rest and corrected the errors when they felt they were ready enough to do so. One example was:

> *"As soon as I received the feedback, I turned off the phone and had some rest before correcting the errors."*
> (Participant 4)

Based on the response, it may be possible that they may have been tired, so they wanted to have a rest to be more ready before correcting their errors. However, there was one participant reporting that she corrected the errors as soon as she received the feedback because she was still in a mood for work, but it could be a coincidence that she happened to be free and ready to correct the errors right away.

According to the result of the questionnaire, the other outstanding affective engagement that influenced behavior was that most participants (96.15%) kept correcting the errors according to the

teacher written corrective feedback because they were not afraid to make wrong corrections. It could be explained that they may have planned how to get help or confirm their corrections from their teacher and peers because most participants tended to consult with them a lot.

Regarding the influence of the affective engagement on cognition, it was found that the participants scanned the feedback to get an overview of the teacher written corrective feedback they received despite having a shock or a surprise earlier. It could be assumed that the participants were not overwhelmed by the feedback even though some of them reported that the feedback looked complex for them, which was consistent with the results of the questionnaire reporting that most participants (88.46%) did not feel so upset that they could not pay attention to the errors later after receiving the feedback, and most participants (92.31%) had positive feelings towards the teacher written corrective feedback, so they put much effort to understand it. It was possible that the participants may have regulated their negative emotions since the result of the questionnaire revealed that most participants (92.31%) could regulate their negative emotions while correcting the errors to encourage themselves during revision. Being able to convert the negative emotions into positive ones to encourage themselves to work on the error correction is in line with Han and Hyland (2015) who also found one participant who could turn her negative feelings into motivation. In addition, the findings may disagree with Truscott (1996) who argued that written corrective feedback could make learners have negative emotions and lose their interest during error corrections because it was found that the participants could regulate their negative emotions by stopping to take a break from correcting the errors.

2.3 Cognitive engagement

The discussion of cognitive engagement is presented in two sections: the participants' cognitive engagement and the influence of the cognitive engagement on behavior and feelings.

2.3.1 The participants' cognitive engagement

The participants' understanding of the feedback was found to be different at three levels: total understanding, partial understanding, and no understanding. Based on the evidence from the participants' responses, total understanding could be interpreted as knowing what the specific errors are based on teacher written corrective feedback and how to correct the error according to the feedback. One example is:

> "*I understood this RS [run-on sentences], so I corrected the error by replacing a comma with a full stop between the two sentences. [...]*" (Participant 5)

According to the response, the participant may employ reasoning as the cognitive strategy according to Oxford (2017), since she could understand the feedback and explain how to correct the error correctly. However, understanding one type of error codes did not necessarily mean that the participants could understand everything about the error. Receiving the same error codes could confuse some participants due to the errors in different aspects in the same error category. One example is:

> "*I knew this F [Fragments] for "Play my best friend" [missing verb] because I felt that the sentence isn't complete, but I didn't understand this F for "keep promises and keep words" [missing subject].* (Participant 4)

Based on this statement, even though the participant received the same error code, it showed that she understood that *"Play my best friend"* was wrong even though she did not explain it with a clear

metalinguistic explanation, whereas she did not understand what was wrong with *"keep promise and keep words."*

Next, partial understanding could be interpreted as having a broad sense of what the errors are according to teacher written corrective feedback but not being able to identify them more precisely and figure out how to correct them based on the feedback. Here is the example of the responses indicating their partial understanding of the feedback:

> *"[...] For the F [Fragments], I only knew that the sentence had a problem, but I didn't know what it was."* (Participant 1)

Finally, no understanding could be interpreted as not knowing both what the errors are and how to correct them, which likely causes incorrect revision.

The findings may be consistent with the three levels of awareness, according to Schmidt (1994) in some ways. Total understanding can be equivalent to the understanding level according to Schmidt (1994) because the total understanding in this study involved being able to identify specific errors and correct them accurately according to the teacher written corrective feedback. Partial understanding may be similar to the noticing level (Schmidt, 1994) since it tended to cause the participants to learn more from resources and more capable peers and teachers. However, in this study, no understanding may be different from the perception level based on Schmidt (1994) in terms of consciousness because the teacher written corrective feedback in this study may be explicit enough to help the participants notice their errors as a result of the questionnaire found that almost all participants (96.15%) learned grammatical points related to their errors while editing them. Only a tiny minority of participants (3.85%) did not because they might have understood the feedback initially so that they did not have to learn.

The other dominant cognitive engagement reported in the questionnaire by more than 80 percent of participants was as follows:

- Most participants (92.31%) did not feel frustrated when they considered that the revision strategies which they had used for correction did not work well.

- Most participants (88.46%) planned how to correct the errors according to the teacher written corrective feedback.

- Most participants (88.46%) evaluated whether the correction was accurate or not.

- Most participants (88.46%) felt happy when they could analyze the errors according to the feedback.

- Most participants (84.62%) activated their previous knowledge of English grammatical points related to the errors.

According to this result, these statements could reveal that the participants used many cognitive and metacognitive strategies based on Oxford (2017). According to Oxford (2017), for the cognitive strategies, activating the previous knowledge related to the errors could result from the nature of the teacher written corrective feedback. Since the feedback did not explicitly provide correction, the participants had to retrieve their previous knowledge from their long-term memory to analyze the errors according to the feedback. Also, this cognitive strategy may be necessary based on the "analyzing / comparing written corrective feedback input + long-term memory knowledge" stage, according to the cognitive-processing stages for a single written corrective feedback episode (Bitchener, 2019). Planning how to correct the errors and evaluating the correction could be interpreted as the metacognitive strategies according to Oxford (2017) because both strategies focused on how to deal with error corrections so that the participants could regulate their learning from error corrections and edit the errors successfully.

2.3.2 The influence of the cognitive engagement on behavior and feelings

According to the participants' responses, it was found that the cognitive engagement affected other types of student engagement with teacher written corrective feedback. Since all the participants reported that they corrected the errors they understood most first, and they corrected the ones they understood less later, it can be assumed that levels of understanding may influence their decision to prioritize which errors the participants wanted to correct first. The finding was also consistent with the result of the questionnaire in Table 5, which found that all the participants (100%) corrected the errors they understood most before correcting the errors which they understood less. Therefore, prioritizing the errors based on understanding may reflect the participants' planning for cognition as the metacognitive strategy according to Oxford (2017) by planning how to deal with the errors.

In addition, when they could partially or not understand the feedback, they sought more clarification about the feedback by searching information on websites and consulting with a teacher and their friends. One example of the responses is:

> *"At first, I searched the internet, and when I didn't know how to correct some difficult errors, I asked my friend for help. Then I corrected the errors, and I consulted with you [the researcher] later to check my correction."* (Participant 4)

According to Oxford (2017), searching for information on websites and consulting with a teacher and friends may be the strategies that resulted from planning for cognition as the metacognitive strategy by planning and deciding how to help them process the feedback.

It is worthy to note that even though searching for information on websites and consulting with a teacher and friends were frequently used for the behavioral engagement and the cognitive engagement, the purpose of the two strategies for cognitive engagement differed from the behavioral engagement. Cognitively engaging with the teacher written corrective feedback by using the two strategies was for gaining more understanding and confirming their understanding to the feedback, while behaviorally engaging with the feedback by those two was for editing.

However, it was not sure whether editing could lead to understanding or not because there was one response showing that the participant may correct her error by simply copying the example sentence.

> "While trying to correct the error [SS or Sentence Structure], I found a sentence on a website, and I thought it was a good way to correct my sentence. So, I changed the sentence like that one [the example sentence]." (Participant 2)

For the participants' feelings while cognitively engaging with the teacher written corrective feedback, slightly negative feelings such as stress and upset were reported by most participants. This response could be assumed that correcting the errors might involve complex processes for the participants, so that it caused them to have little negative feelings. Nevertheless, the participants regulated their negative emotions by taking a break and continuing correcting the errors later, which may indicate the use of metacognitive strategy to control the emotions while trying to understand the feedback and correcting the errors. Their responses were found to be consistent with the results of the questionnaire. It was reported that most participants (92.31%) regulated their negative emotions while correcting the errors to encourage themselves to continue revision.

These results are consistent with the finding obtained in Han and Hyland (2015) who reported one of their participants who had high degree of student engagement could regulate her negative feelings into motivation and could eventually make successful revisions.

Nevertheless, it is worthy to note that the findings from this study might not entirely support or confirm the results of the previous studies because the present study investigated student engagement with the teacher written corrective feedback in paragraph writing, whereas other studies (e.g., Han & Hyland, 2015) explored student engagement with the feedback in essay writing.

Limitations of the study

The main limitation of the study was that the participants were all female, so the generalizability of findings to other settings, especially male students, may not be possible. Next, conducting the study online was another limitation of the study. The participants preferred not to turn on their camera during the study, so it was difficult to observe their behavior and reactions during the study. Another limitation of the study was time constraint because the English Reading-Writing course was scheduled once a week, and the duration of each period was changed from 50 minutes to 40 minutes. Moreover, there were a few periods that had to be canceled due to the new school regulation to allow the students to take a break from studying online for a week every month.

Pedagogical implications

The findings from the study may provide some suggestions for pedagogical implications of student engagement with teacher written corrective feedback for feedback provision in teaching writing. The suggestions are as follows:

First, it is necessary to consider when written corrective feedback will be provided during the writing process. Although there has not been a clear conclusion, providing the feedback when students are going to edit the errors seems to be more

effective. According to Bitchener (2019), it is necessary that students should be oriented to accuracy. If teachers provide the feedback for content and accuracy at the same time, the students may not fully focus and engage with written corrective feedback and might ignore the feedback. In addition, providing feedback for both content and accuracy can be tiring for teachers, especially when teachers intend to provide feedback that covers many error categories like the study.

Second, teachers should explicitly introduce the feedback to students and explain when and how it will be delivered to students so that students can be ready to learn from the feedback. If the feedback covers many error categories like this study, teachers should briefly explain each type of the errors to them with or without examples. However, it is not necessary to give them full grammatical explanations for every error category. This study also recommends that the feedback guideline should be available for reference.

Third, according to the findings of this study, teachers can provide or suggest websites relevant to the errors to the students. It could increase their behavioral engagement and cognitive engagement to learn about the grammatical points related to their errors. In addition, the teachers may offer opportunities for students to consult with the teacher in teacher-student writing conferences so that the students can seek more clarification and confirm their understanding of the feedback.

Recommendations for further research

Based on the findings of the present study, further research should be conducted with high school male and female students for generalizability of the findings to other contexts relevant to high school students because this study lacked male participants.

It would be useful to conduct a replication of the study, but it should expand the scope of the research by including a few individual differences factors and contextual factors to gain more insights of student engagement with teacher written corrective feedback since student engagement is mediated with individual differences factors and contextual factors (Ellis, 2010). However, time constraints made this study unfeasible to do so.

Alternatively, a similar study with different types of written corrective feedback such as direct written corrective feedback could be developed to reveal the association between student engagement with the direct corrective feedback and learning outcomes as well as explore how participants engaged with the feedback behaviorally, affectively, and cognitively.

A qualitative study could be developed to compare how high school students engage with different written corrective feedback, such as direct and indirect feedback, in the three dimensions and explore how their engagement with each feedback influences the learning outcome. It could potentially yield clearer evidence of the differences in terms of the engagement with the feedback and the influence on the learning outcome.

REFERENCES

Almasi, E., & Tabrizi, A. R. N. (2016). The effects of direct vs. indirect corrective feedback on iranian EFL learners' writing accuracy. *Journal of Applied Linguistics and Language Research*, *3*(1), 74-85.

Anderson, J. R. (1980). *Cognitive psychology and its implications*. W. H. Freeman.

Ashwell, T. (2000). Patterns of teacher response to student writing in a multiple-draft composition classroom: Is content feedback followed by form feedback the best method? *Journal of second language writing*, *9*(3), 227-257.

Bachman, L. F., & Palmer, A. S. (1996). *Language testing in practice: Designing and developing useful language tests*. Oxford University Press.

Bitchener, J. (2017). Why some L2 learners fail to benefit from written corrective feedback. In H. Nassaji & E. Kartchava (Eds.), *Corrective feedback in second language teaching and learning* (pp. 129-140). Routledge.

Bitchener, J. (2018). Direct versus indirect grammar feedback. In *The TESOL encyclopedia of English language teaching* (pp. 1-8).

Bitchener, J. (2019). The Intersection between SLA and Feedback Research. In K. Hyland & F. Hyland (Eds.), *Feedback in Second Language Writing: Contexts and Issues* (2 ed., pp. 88-105). Cambridge University Press.

Bitchener, J., & Ferris, D. R. (2012). *Written corrective feedback in second language acquisition and writing*. Routledge.

Bitchener, J., & Knoch, U. (2010). Raising the linguistic accuracy level of advanced L2 writers with written corrective feedback. *Journal of second language writing*, *19*(4), 207-217.

Bitchener, J., & Storch, N. (2016). *Written corrective feedback for L2 development*. Multilingual Matters.

Bonilla López, M., Van Steendam, E., Speelman, D., & Buyse, K. (2018). The differential effects of comprehensive feedback forms in the second language writing class. *Language Learning*, *68*(3), 813-850.

Boonyarattanasoontorn, P. (2017). An investigation of Thai students' English language

writing difficulties and their use of writing strategies. *Journal of Advanced Research in Social Sciences and Humanities*, *2*(2), 111-118.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4 ed.). Pearson.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5 ed.). Sage publications.

DeKeyser, R. (2020). Skill acquisition theory. In B. VanPatten, G. D. Keating, & S. Wulff (Eds.), *Theories in second language acquisition: An introduction* (3 ed.). Routledge.

Dueraman, B. (2015). The Crucial Point in Time Where Thai Students Are Introduced English Language Writing. *English Language Teaching*, *8*(9), 96-103.

Elfiyanto, S., & Fukazawa, S. (2021). Three Written Corrective Feedback Sources in Improving Indonesian and Japanese Students' Writing Achievement. *International Journal of Instruction*, *14*(3), 433-450.

Ellis, R. (2009). A typology of written corrective feedback types. *ELT journal*, *63*(2), 97-107.

Ellis, R. (2010). Epilogue: A framework for investigating oral and written corrective feedback. *Studies in Second Language Acquisition*, *32*(2), 335-349.

Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, *36*(3), 353-371.

Fazio, L. L. (2001). The effect of corrections and commentaries on the journal writing accuracy of minority-and majority-language students. *Journal of second language writing*, *10*(4), 235-249.

Ferris, D. (1999). The case for grammar correction in L2 writing classes: A response to Truscott (1996). *Journal of second language writing*, *8*(1), 1-11.

Ferris, D. (2006). Does error feedback help student writers? New evidence on short- and long-term effects of written error correction. In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (1 ed., pp. 81-104). Cambridge University Press.

Ferris, D. (2011). *Treatment of error in second language student writing* (2 ed.). The

University of Michigan Press.

Ferris, D. R. (2010). Second language writing research and written corrective feedback in SLA: Intersections and practical applications. *Studies in Second Language Acquisition*, *32*(2), 181-201.

Ferris, D. R., & Hedgcock, J. S. (2014). *Teaching ESL composition* (3 ed.). Routledge.

Ferris, D. R., Liu, H., Sinha, A., & Senna, M. (2013). Written corrective feedback for individual L2 writers. *Journal of second language writing*, *22*(3), 307-329.

Frear, D., & Chiu, Y.-h. (2015). The effect of focused and unfocused indirect written corrective feedback on EFL learners' accuracy in new pieces of writing. *System*, *53*, 24-34.

Fredricks, J. (2013). Behavior engagement in learning. In J. Hattie & E. M. Anderman (Eds.), *International Guide to Student Achievement* (pp. 42-44). Routledge.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of educational research*, *74*(1), 59-109.

Fredrickson, B. L. (2013). Positive emotions broaden and build. In *Advances in experimental social psychology* (Vol. 47, pp. 1-53). Elsevier.

Gass, S. M., Behney, J., & Plonsky, L. (2020). *Second language acquisition: An introductory course* (5 ed.). Routledge.

Han, Y. (2017). Mediating and being mediated: Learner beliefs and learner engagement with written corrective feedback. *System*, *69*, 133-142.

Han, Y. (2019). Written corrective feedback from an ecological perspective: The interaction between the context and individual learners. *System*, *80*, 288-303.

Han, Y., & Hyland, F. (2015). Exploring learner engagement with written corrective feedback in a Chinese tertiary EFL classroom. *Journal of second language writing*, *30*, 31-44.

Hedge, T. (2005). *Writing* (2 ed.). Oxford University Press.

Hyland, F. (2003). Focusing on form: Student engagement with teacher feedback. *System*, *31*(2), 217-230.

Hyland, K. (2019). *Second language writing* (2 ed.). Cambridge University Press.

Hyland, K., & Hyland, F. (2019). Contexts and issues in feedback on L2 writing. In K.

Hyland & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (2 ed., pp. 1-22). Cambridge University Press.

Karim, K., & Nassaji, H. (2019). The effects of written corrective feedback: A critical synthesis of past and present research. *Instructed Second Language Acquisition*, *3*(1), 28-52.

Kim, H. R., & Bowles, M. (2019). How Deeply Do Second Language Learners Process Written Corrective Feedback? Insights Gained From Think ‑ Alouds. *Tesol Quarterly*, *53*(4), 913-938.

Kim, Y., Choi, B., Kang, S., Kim, B., & Yun, H. (2020). Comparing the effects of direct and indirect synchronous written corrective feedback: Learning outcomes and students' perceptions. *Foreign Language Annals*, *53*(1), 176-199.

La Russa, F. (2021). The effects of students' engagement with direct and indirect corrective feedback on text rewriting. *Instructed Second Language Acquisition*, *5*(1), 104–127-104–127.

Lalande, J. F. (1982). Reducing composition errors: An experiment. *The Modern Language Journal*, *66*(2), 140-149.

Lee, I. (2008). Student reactions to teacher feedback in two Hong Kong secondary classrooms. *Journal of second language writing*, *17*(3), 144-164.

Lee, I. (2013). Research into practice: Written corrective feedback. *Language Teaching*, *46*(1), 108-119.

Lee, I. (2017a). *Classroom writing assessment and feedback in L2 school contexts*. Springer.

Lee, I. (2017b). Working hard or working smart: Comprehensive versus Focused Written Corrective Feedback in L2 Academic Contexts. In J. Bitchener, N. Storch, & R. Wette (Eds.), *Teaching writing for academic purposes to multilingual students* (pp. 168-180). Routledge.

Li, S., & Roshan, S. (2019). The associations between working memory and the effects of four different types of written corrective feedback. *Journal of second language writing*, *45*, 1-15.

Liu, Q., & Brown, D. (2015). Methodological synthesis of research on the effectiveness of

corrective feedback in L2 writing. *Journal of second language writing*, *30*, 66-81.

Mahfoodh, O. H. A. (2017). "I feel disappointed": EFL university students' emotional responses towards teacher written feedback. *Assessing Writing*, *31*, 53-72.

Mao, Z., & Lee, I. (2020). Feedback scope in written corrective feedback: analysis of empirical research in L2 contexts. *Assessing Writing*, *45*, 100469.

McLaughlin, B. (1978). The monitor model: Some methodological considerations. *Language Learning*, *28*(2), 309-332.

McLaughlin, B. (1980). Theory and research in second language learning: an emerging paradigm 1. *Language Learning*, *30*(2), 331-350.

McLaughlin, B. (1990). Restructuring. *Applied linguistics*, *11*(2), 113-128.

Mills, G. E., & Gay, L. R. (2019). *Educational research: Competencies for analysis and applications* (12 ed.). Pearson.

Mirzaii, M., & Aliabadi, R. B. (2013). Direct and indirect written corrective feedback in the context of genre-based instruction on job application letter writing. *Journal of Writing Research*, *5*(2).

Montgomery, J. L., & Baker, W. (2007). Teacher-written feedback: Student perceptions, teacher self-assessment, and actual teacher performance. *Journal of second language writing*, *16*(2), 82-99.

Nation, I. S. P., & Macalister, J. (2020). *Teaching ESL/EFL reading and writing* (2 ed.). Routledge.

Nicolás-Conesa, F., Manchon, R. M., & Cerezo, L. (2019). The effect of unfocused direct and indirect written corrective feedback on rewritten texts and new texts: Looking into feedback for accuracy and feedback for acquisition. *The Modern Language Journal*, *103*(4), 848-873.

Norris, J. M., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta‐analysis. *Language Learning*, *50*(3), 417-528.

O'Donnell, K., & Reschly, A. L. (2020). Assessment of Student Engagement. In A. L. Reschly, A. J. Pohl, & S. L. Christenson (Eds.), *Student engagement: Effective academic, behavioral, cognitive, and affective interventions at school* (pp. 55-76). Springer.

Oxford, R. L. (2017). *Teaching and researching language learning strategies: Self-regulation in context* (2 ed.). Routledge.

Padermprach, N. (2017). *The problems of English language education at the upper secondary level in Thailand: The perceptions of Thai EFL teachers and students in Bangkok* University of Warwick].

Pagano, R. R. (2013). *Understanding statistics in the behavioral sciences* (10 ed.). Cengage Learning.

Pawlak, M. (2013). *Error correction in the foreign language classroom: Reconsidering the issues*. Springer Science & Business Media.

Qi, D. S., & Lapkin, S. (2001). Exploring the role of noticing in a three-stage second language writing task. *Journal of second language writing, 10*(4), 277-303.

Robb, T., Ross, S., & Shortreed, I. (1986). Salience of feedback on error and its effect on EFL writing quality. *Tesol Quarterly, 20*(1), 83-96.

Sachs, R., & Polio, C. (2007). LEARNERS'USES OF TWO TYPES OF WRITTEN FEEDBACK ON A L2 WRITING REVISION TASK. *Studies in Second Language Acquisition, 29*(1), 67-100.

Salkind, N. J. (2007). Shapiro-Wilk Test for Normality. In *Encyclopedia of Measurement and Statistics* (pp. 884-886): SAGE Publications, Inc.

Sampson, A. (2012). Coded and uncoded error feedback: Effects on error frequencies in adult Colombian EFL learners' writing. *System, 40*(4), 494-504.

Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied linguistics. *Consciousness in second language learning, 11*, 237-326.

Schmidt, R. (2010, December 2-4). Attention, awareness, and individual differences in language learning. CLaSIC 2010, Singapore.

Schmidt, R. W. (1990). The role of consciousness in second language learning. *Applied linguistics, 11*(2), 129-158.

Sheen, Y., Wright, D., & Moldawa, A. (2009). Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System, 37*(4), 556-569.

Sheskin, D. J. (2011). *Handbook of Parametric and Nonparametric Statistical Procedures* (5 ed.). Routledge.

Shintani, N., & Ellis, R. (2015). Does language analytical ability mediate the effect of written feedback on grammatical accuracy in second language writing? *System*, *49*, 110-119.

Shintani, N., Ellis, R., & Suzuki, W. (2014). Effects of written feedback and revision on learners' accuracy in using two English grammatical structures. *Language Learning*, *64*(1), 103-131.

Stefanou, C., & Révész, A. (2015). Direct written corrective feedback, learner differences, and the acquisition of second language article use for generic and specific plural reference. *The Modern Language Journal*, *99*(2), 263-282.

Stevenson, M., & Phakiti, A. (2014). The effects of computer-generated feedback on the quality of writing. *Assessing Writing*, *19*, 51-65.

Suzuki, W., Nassaji, H., & Sato, K. (2019). The effects of feedback explicitness and type of target structure on accuracy in revision and new pieces of writing. *System*, *81*, 135-145.

Tian, L., & Zhou, Y. (2020). Learner engagement with automated feedback, peer feedback and teacher feedback in an online EFL writing context. *System*, *91*, 102247.

Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, *46*(2), 327-369.

Uscinski, I. (2017). L2 learners' engagement with direct written corrective feedback in first-year composition courses. *Journal of Response to Writing*, *3*(2), 3.

Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2008). The effect of direct and indirect corrective feedback on L2 learners' written accuracy. *ITL-International Journal of Applied Linguistics*, *156*(1), 279-296.

Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2012). Evidence on the effectiveness of comprehensive error correction in second language writing. *Language Learning*, *62*(1), 1-41.

Watcharapunyawong, S., & Usaha, S. (2013). Thai EFL Students' Writing Errors in Different Text Types: The Interference of the First Language. *English Language Teaching*, *6*(1), 67-78.

Weigle, S. C. (2002). *Assessing writing*. Cambridge University Press.

White, R., & Arndt, V. (1991). *Process writing*. Longman.

Wu, Y., & Schunn, C. D. (2021). The Effects of Providing and Receiving Peer Feedback on Writing Performance and Learning of Secondary School Students. *American Educational Research Journal*, *58*(3), 492-526.

Zhang, Z. (2017). Student engagement with computer-generated feedback: A case study. *ELT journal*, *71*(3), 317-328.

Zhang, Z. V., & Hyland, K. (2018). Student engagement with teacher and automated feedback on L2 writing. *Assessing Writing*, *36*, 90-102.

Zheng, Y., & Yu, S. (2018). Student engagement with teacher written corrective feedback in EFL writing: A case study of Chinese lower-proficiency students. *Assessing Writing*, *37*, 13-24. https://doi.org/https://doi.org/10.1016/j.asw.2018.03.001

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Appendix

Appendix A
Informed Consent

Informed Consent Form

The following information is provided to help you make a decision to participate in the present study:

1. The title of the study is "Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback."

2. The research objectives are to examine how student engagement with teacher written corrective feedback is related to English writing grammar accuracy and to investigate how high school students engage with teacher written corrective feedback behaviorally, affectively, and cognitively.

3. The research instruments used in this study are writing tests, a writing task, focus group interview protocols, and a questionnaire, so what the researcher will get from the participants in the study will be the scores of the writing tests and writing task and the responses of the interview and questionnaire. Other types of information apart from these will not be collected.

4. You can ask any questions related to the research at any time during the study. After publishing the study in an article, the researcher is pleased to share it to you. Any personal information relevant to the participants will be confidential. Only the researcher is the person who know the participants' identity.

5. There are no known risks and discomforts associated with the study. You are aware that you are free not to participate the study or withdraw at any time without affecting the researcher.

Please confirm whether you are interested in the participation or not in the Google Form which has been shared in the Google Classroom. You are confirming it with full knowledge of the purposes and the procedures of the study.

Thanakorn Santanatanon

(Researcher)
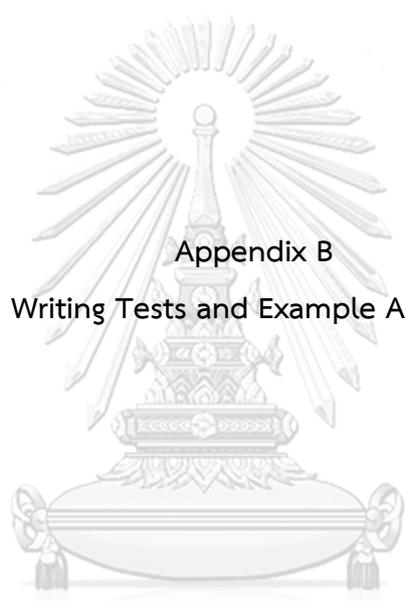
Appendix B

Writing Tests and Example Answers

Name _____ Class _____ No. _____

Pre-test

Descriptive Paragraph Writing

Directions: Write a short paragraph at least 120 words by describing a person you know. What does this person look like? What are some of his or her characteristics? Write it in 50 minutes. (50 points)

....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....

Name _____ Class _____ No. _____

Post-test
Descriptive Paragraph Writing

Directions: Write a short paragraph at least 120 words by describing a person you admire. What does this person look like? What are some of his or her characteristics? Write it in 50 minutes. (50 points)

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

Example Answer for Pre-Test

My Funny Friend

Peter is a good-looking boy with a good sense of humor. He has got short dark hair. He has little wrinkles around his eyes whenever he smiles, so he always wears his glasses to cover them. What makes Peter more attractive than other people whom I know is that he has got light brown eyes, which can be rarely found in Thai people. Although he is as tall as me, he is more well-built. Peter is very friendly and outgoing. He enjoys spending time talking to anyone and can make friends with other people easily. He can tell a lot of funny stories. I can never get bored of his jokes. I believe that Peter can attract a lot of people with his unique look and also bring joy to them. (131 words)

Example Answer for Post-Test

Mariah Carey

Mariah Carey is an American singer and songwriter whom I have admired for a long time. She has got long blonde curly hair. She has got dark brown eyes and a straight nose. She usually uses her long hair to cover the left side of her face, which makes her look good. She has a slender body. Mariah is a very caring and generous person. She always respects and supports other people who are in need. Next, she is modest about herself. Although there are many singers who have followed her mentioning how her music has an impact on them, Mariah never talks much about her influence on them. Finally, she is diligent. She always continues making new songs and performing in many shows. In conclusion, Mariah Carey is a person who has a great appearance and good personalities. (139 words.)

Appendix C

Writing Task

Writing Task

Describe your classmate who is in the same class. What does she look like? What are her personalities? Prepare some questions to ask your classmate to help you gather more information about her. Make sure to describe your classmate so clearly that the teacher can identify the classmate you describe. Write it at least 150 words.

Appendix D

Interview Protocol

จุฬาลงกรณ์มหาวิทยาลัย

CHULALONGKORN UNIVERSITY

Interview Protocol (Part 1)

Research Title: Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback

Objective: To understand the students and the context where the research will be conducted

Date and Time of Interview: _____ **Place:** _____

Interviewer: _____

Interviewee:

1. _____

2. _____

3. _____

4. _____

5. _____

Part 1: Students' Background Information and Past Experiences in English Writing

Questions:

1. Did you study English Reading-Writing when you were studying in Grade 7-9? What was your grade from the last semester?

2. Tell me about your past experiences of learning English writing.

   Possible follow-up sub-questions

      a. How did your former teachers teach writing?

      b. What did they usually focus in the writing class?

      c. What kind of the writing task did you usually do? How was it?

      d. How did they assist you to improve your writing skill?

3. In your opinion, what do you think about learning English writing?

Possible follow-up sub-questions

a. What is the importance of learning English writing?

b. How can learning English writing help you in learning English?

c. In your opinion, which aspect of writing is more important between accuracy and content?

4. What do you think about teacher feedback on linguistic errors in your writing?

5. Do you have any further comments about learning English writing?

Interview Protocol (Part 2)

Research Title: Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback

Objective: To investigate student engagement with teacher written corrective feedback on the English writing grammar accuracy

Date and Time of Interview: _____ **Place:** _____

Interviewer: _____

Interviewee:

1. _____

2. _____

3. _____

4. _____

5. _____

Part 2: Student Engagement with Teacher Written Corrective feedback in Three Perspectives

Questions:

1. Based on this attempt for the correction, ... (Behavioral Engagement)

Situation 1: Correct revision – How could you revise it correctly?

Situation 2: Incorrect revision – What difficulties did you have to correct this error?

Situation 3: Delete errors – Why did you decide to delete this error?

Situation 4: Substitution – Why did you correct this error in a different way from the teacher feedback?

Situation 5: No change – Why did you remain this error in this sentence?

2. What strategies did you use to correct the errors in your earlier draft according to the teacher's feedback? (Behavioral engagement)

Possible follow-up sub-questions

    a. What did you do to help you understand the teacher's feedback more?

    b. How did you feel after making a correction according to the teacher's feedback?

3. To what extent did you understand the teacher's feedback on linguistic errors in your earlier draft? (Cognitive engagement)

Possible follow-up sub-questions

a. Based on the teacher's feedback in the earlier draft, what did you do after you notice or have awareness of what kinds of linguistic errors were? How?

    b. How did you feel while trying to understand the teacher's feedback?

4. How did you immediately feel after receiving teacher's feedback on linguistic errors in your earlier draft? (Affective engagement)

Possible follow-up sub-questions

    a. Did your feeling make you want to revise or not? Why?

    b. Did your feeling make you think the errors in the draft were difficult to correct? Why?

Interview Protocol (Part 3)

Research Title: Exploring and Analysis of Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback

Objective: To investigate how student engagement with teacher written corrective feedback on the English writing grammar accuracy can contribute to the accuracy in English writing based on the posttest.

Date and Time of Interview: _____ **Place:** _____

Interviewer: _____

Interviewee:

1. _____

2. _____

3. _____

4. _____

5. _____

Part 3: The Contribution of Their Engagement with Teacher Written Corrective Feedback to English Writing Grammar Accuracy

Questions:

1. In your opinion, do you think you develop any new emotional reactions or attitudes towards English writing grammar accuracy after engaging with teacher written corrective feedback? How did it make you write more accurately in the writing post-test? On a scale of 1-10, how would you rate the contribution of the affective engagement with teacher written corrective feedback to English writing grammar accuracy in the test? (Affective engagement)

2. In your opinion, do you think you can write more accurately after using any strategies to correct linguistic errors? How did it make you write more accurately in the writing post-test? On a scale of 1-10, how would you rate the contribution of the behavioral engagement with teacher written corrective feedback to English writing grammar accuracy in the test? (Behavioral engagement)

3. In your opinion, do you think you can write more accurately after understanding teacher's feedback on linguistic errors? How did it make you write more accurately in the writing post-test? On a scale of 1-10, how would you rate the contribution of the cognitive engagement with teacher written corrective feedback to English writing grammar accuracy in the test? (Cognitive engagement)

4. Do you have any more comments or reflections on the engagement with teacher written corrective feedback?
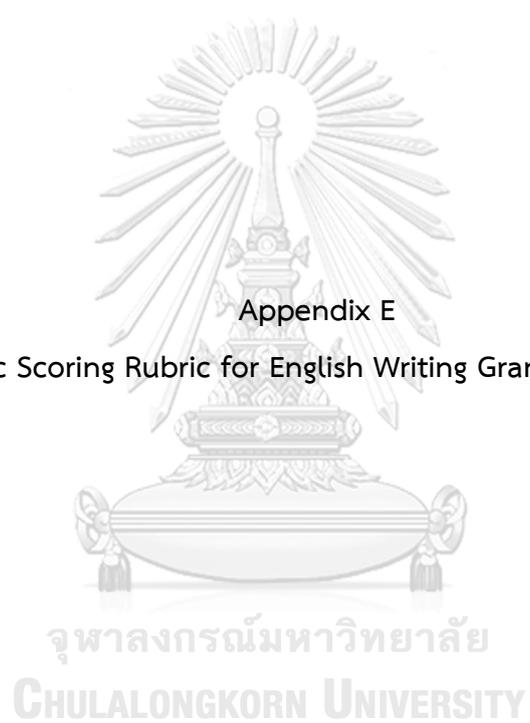
Appendix E

Analytic Scoring Rubric for English Writing Grammar Accuracy

Scoring Rubric for Accuracy in English Writing

Error categories adapted from Ferris's (2006) error categories and codes used in teacher marking and in analysis	Description	Score				
		4	3	2	1	0
Word choice	Excluded spelling errors, pronouns, and unidiomatic usage					
Verb tense						
Verb form						
Word form	Excluded verb form errors					
Articles						
Singular-plural	Referred to noun ending errors					
Pronouns						
Run-on	Included comma splices					
Fragment						
Sentence structure	Included missing and unnecessary words and phrases and word order problems. Excluded run-ons, comma splices, and fragments					
Subject-verb agreement	Did not include other singular-plural or verb form errors					
Total						
Total Score						

Score Description	
Score	Description
4	The errors in this category cannot be found within the first 100 words of the text. "No errors" for four points means that a student can write the text without the errors in this category. In other words, the student has a complete mastery to use the particular structures in writing so that there is no evidence of inaccurate use that can be classified under this error category.
3	The errors in this category can be found few within the first 100 words of the text. A student can write the text with extensive use of the particular structures in writing.
2	The errors in this category can be found in a small number of them within the first 100 words of the text. A student can write the text with moderate use of the particular structures in writing. The errors in this category does not make the meaning of the text confusing.
1	The errors in this category can be found in a large number of them within the first 100 words of the text. A student can write the text with limited use of the particular structures in writing. The errors in this category make the meaning of the text confusing.
0	The errors in this category cannot be found for evaluation within the first 100 words of the text. "No errors" for no points can be interpreted in two ways. First, there is no evidence of attempts to use particular structures which can be classified under this error category so that it is not enough to evaluate. Second, there is evidence of using particular structures, but they do not communicate or make sense despite well-formed sentence structures. However, it does not necessarily mean that a student cannot use the particular structure for writing.

Appendix F

Analytic Scoring Rubric for English Writing

Analytic Scoring Rubric (adapted from ESL Composition Profile by Jacobs et al, 1981, in Weigle, 2002)

Category	Score (Total)	Criteria
CONTENT (x 3)	4 (12)	EXCELLENT: knowledgeable • substantive • thorough development of thesis • relevant to assigned topic
	3 (9)	GOOD: some knowledge of subject • adequate range • limited development of thesis • mostly relevant to topic, but lacks detail
	2 (6)	FAIR: limited knowledge of subject • little substance • inadequate development of topic
	1 (3)	POOR: does not show knowledge of subject • non-substantive • non pertinent • OR not enough to evaluate
ORGANIZATION (x 2.5)	4 (10)	EXCELLENT: fluent expression • ideas clearly stated / supported • succinct • well-organized • logical sequencing • cohesive
	3 (7.5)	GOOD: somewhat choppy • loosely organized but main ideas stand out • limited support • logical but incomplete sequencing
	2 (5)	FAIR: non-fluent • ideas confused or disconnected • lacks logical sequencing and development
	1 (2.5)	POOR: does not communicate • no organization • OR not enough to evaluate
LANGUAGE USE (x 2.75)	4 (11)	EXCELLENT: effective complex constructions • few errors of agreement, tense, number, word order/function, article, pronouns, prepositions
	3 (8.25)	GOOD: effective but simple constructions • minor problems in complex constructions • several errors of agreement, tense, number, word order/function, article, pronouns, prepositions but meaning seldom obscured

Category	Score (Total)	Criteria
LANGUAGE USE (x 2.75)	2 (5.5)	FAIR: major problems in simple/ complex constructions • frequent errors of negation, tense, number, word order/function, article, pronouns, prepositions and/ or fragments, run-ons, deletions • meaning confused or obscured
	1 (2.75)	POOR: virtually no mastery of sentence construction rules • dominated by errors • does not communicate • OR not enough to evaluate
VOCABULARY (x 2.5)	4 (10)	EXCELLENT: sophisticated range • effective word/idiom choice and usage • word for mastery • appropriate register
	3 (7.5)	GOOD: adequate range • occasional errors of effective word/idiom form, choice, usage but meaning not obscured
	2 (5)	FAIR: limited range • frequent errors of effective word/idiom form, choice, usage • meaning confused or obscured
	1 (2.5)	POOR: essentially translation • little knowledge of English vocabulary, idioms, word form • OR not enough to evaluate
MECHANICS (x 1.75)	4 (7)	EXCELLENT: demonstrates mastery of conventions • few errors of spelling, punctuation, capitalization, paragraphing
	3 (5.25)	GOOD: occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured
	2 (3.5)	FAIR: frequent errors of spelling, punctuation, capitalization, paragraphing • poor handwriting • meaning confused or obscured
	1 (1.75)	POOR: no mastery of conventions • dominated by errors of spelling, punctuation, capitalization, paragraphing • handwriting illegible • OR not enough to evaluate
Total Score (50)		
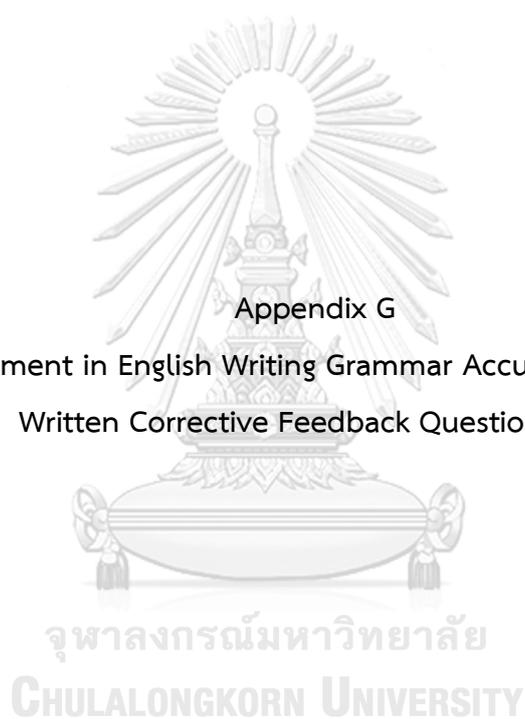
Appendix G

Student Engagement in English Writing Grammar Accuracy Based on Teacher

Written Corrective Feedback Questionnaire

Student Engagement in English Writing Grammar Accuracy Based on Teacher Written Corrective Feedback Questionnaire

Directions: Read each of the following statements very carefully and give an answer that is most closely related to you.

Questions	Yes	No
Part 1 Behavioral Engagement		
1. I corrected all the errors rather than left them unmodified after receiving the teacher written corrective feedback.		
2. I edited the errors identified with the teacher written corrective feedback on my own.		
3. I took a break from revision in order that I would NOT feel too stressed.		
4. I consulted my peers to help me understand the teacher written corrective feedback.		
5. When I could NOT edit the errors according to the teacher written corrective feedback right away, I did NOT feel tense.		
6. I used English textbooks to help me understand the teacher written corrective feedback.		
7. I looked up words in a dictionary to help me edit the errors according to the teacher written corrective feedback.		
8. I learned grammar points which related to my errors in the text while editing them.		
9. I attended a teacher-student writing conference with my teacher out of the class.		
10. I reviewed the errors before the test.		

Questions	Yes	No
Part 2 Affective engagement		
1. I thought accuracy in writing is as important as content.		
2. I was fine when I received the teacher written corrective feedback.		
3. I did **NOT** feel so upset that I could **NOT** pay attention to the errors in my text later after I received the teacher written corrective feedback.		
4. I did **NOT** feel discouraged while correcting the errors identified with the teacher written corrective feedback.		
5. I kept correcting the errors according to the teacher written corrective feedback because I was **NOT** afraid to make wrong corrections.		
6. When I had negative emotions while correcting the errors, I could regulate them to encourage myself in revision.		
7. I felt confident that my revision was correct after I had corrected the errors identified with the teacher written corrective feedback.		
8. I valued teacher written corrective feedback to help me improve accuracy in writing.		
9. I trusted the teacher written corrective feedback I received so I edited the errors according to it without any doubt.		
10. I had positive feelings towards the teacher written corrective feedback, so I put much effort to understand it.		

Questions	Yes	No
Part 3 Cognitive engagement		
1. I evaluated the effectiveness of the teacher written corrective feedback before editing the errors.		
2. I planned how to correct the errors in my texts according to the teacher written corrective feedback.		
3. I activated my previous knowledge of English grammar points related to the errors identified with the teacher written corrective feedback.		
4. I evaluated whether my correction is accurate or not.		
5. When I considered that the revision strategies which I had used for corrections earlier did **NOT** work well, I was **NOT** frustrated.		
6. I was aware that my text had the errors which were identified with the teacher written corrective feedback on most occasion.		
7. I could recognize the teacher's corrective intention of every error most of the time.		
8. I could diagnose each of the errors according to the teacher written corrective feedback on most occasions.		
9. When I could analyze the errors according to the teacher written corrective feedback, I felt happy.		
10. I corrected the errors identified with the teacher written corrective feedback which I could understand more before I corrected the errors with the one that I could understand less.		

Thank you for completing the questionnaire.
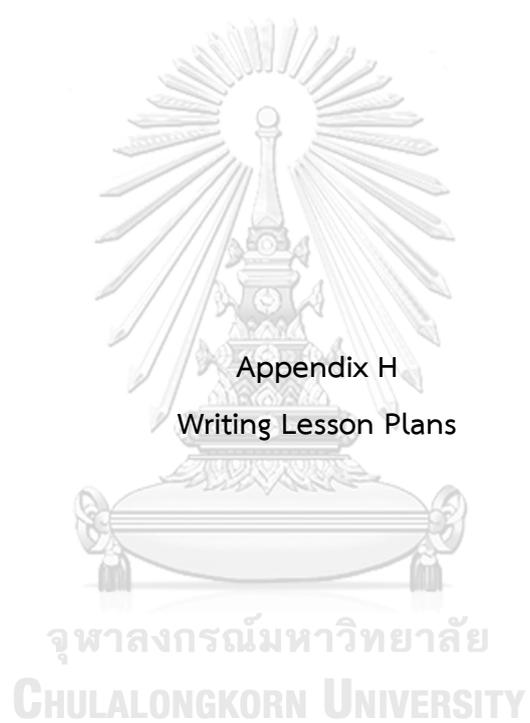
Appendix H

Writing Lesson Plans

จุฬาลงกรณ์มหาวิทยาลัย

CHULALONGKORN UNIVERSITY

Lesson Plan

Descriptive Paragraph:

Considering the Goals of the Writer and Having a Model of the Reader

English Reading-Writing 1   Grade 10   Foreign Language Department

1st Semester   50 minutes   Academic Year 2021

Instructor: Thanakorn Santanatanon

....

Standards and Indicators

Standard FL1.1: Understanding and ability in interpreting what has been heard or read from various types of media, and ability to express opinions with reasons

FL1.1 / Grade 10-12 / 4: Identify the main idea, analyze the essence, interpret and express the opinions from listening to and reading feature articles and entertainment articles, as well as provide the justifications and the examples for illustrations.

Standard FL1.3: Ability to speak and write about information, concepts, and views on various matters

FL1.3 / Grade 10-12 / 1: Speak and write to present data themselves / experiences, news / incidents, matters and various issues of interest to society.

Standard FL2.1: Appreciating the relationship between language and culture of native speakers and ability in using language appropriately

FL2.1 / Grade 10-12 / 1: Choose the language, tone of voice, gestures and manners appropriate to various persons, occasions and places by observing social manners and culture of the native speakers.

Content

1. Descriptive paragraph: Considering the goals of the writer and having a model of the reader

Objectives

1. Students will be able to explain the goal of a descriptive paragraph.

2. Students will be able to identify the model of the reader of a descriptive paragraph.

3. Students will be able to describe their goal and model of the reader of their descriptive paragraph.

4. Students will participate class participation.

Concepts

1. Purpose refers to the reason for the writing. A descriptive paragraph aims to show readers how writers feel or experience people, things, and events and let them experience while reading it. In descriptive paragraph writing, writers use descriptions for different purposes. For example, a historical object is described to show its beauty and its importance to a culture. A new product is described to tell its shape, texture, and characteristics.

2. The model of the reader of a descriptive paragraph can be the writer himself or herself, specific audience such as teachers and classmates, and general public. However, the reader for the writing is the teacher.

Assignments

1. Descriptive Text Presentation

2. Worksheet (Descriptive Paragraph: Considering the Goals of the Writer and Having a Model of the Reader)

Teaching Procedures

Outside-of-class

1. Students find a short descriptive text and prepare to present to the class according to these questions:

    a. What kind of the text is it?

    b. What is the purpose of the text?

c. What kind of information does the text include?

d. Who may be suitable to read this kind of text?

In-class (50 minutes)

2. The teacher selects some students to present their short descriptive text in the class.

3. The teacher tells students that they are going to write about their classmate and asks them to discuss what is their goal to write a text about their friend.

4. The teacher asks students who can be their reader of their text about their classmates and discuss what is the teacher's expectation for their text.

Outside-of-class

5. Students finds one example of a descriptive text about a person and analyzes the text with the following questions:

a. What is the purpose of the text?

b. Who may be suitable to read this kind of text?

c. As a reader of the text, is the text relevant to what you are going to write? Why?

Assessment and Evaluation

Assessment	Measurement	Evaluation
Knowledge (K) - Considering the goals of the writer and having a model of the reader	- A Presentation of Short Descriptive Text - Class discussion	- Students are able to present their text according to the questions correctly at least 70 percent. - Students are able to answer the questions in the class correctly at least 70 percent.
Psychomotor (P) - Analyzing a short descriptive text about a person	- Worksheet (Descriptive Paragraph: Considering the Goals of the Writer and Having a Model of the Reader)	- Students are able to analyze the text according to the questions correctly at least 70 percent.
Affection (A) - Class participation	- Observation form	- Students participant to class discuss at least 50 percent.

Media and Materials

    1. Worksheet

Name .... Class .... No. ....

Descriptive Paragraph:

Considering the Goals of the Writer and Having a Model of the Reader

Put a short descriptive text about a person below and analyze the text with the following questions.

1. What is the purpose of the text?

2. Who may be suitable to read this kind of text?

3. As a reader of the text, is the text relevant to what you are going to write? Why?

....

....

....

....

....

....

After-Teaching Report

1. Teaching Results

....
....
....
....
....
....

2. Problems / Difficulties

....
....
....
....
....
....

3. Suggestions

....
....
....
....
....
....

Instructor's signature ....

(....)

.... / .... / ....
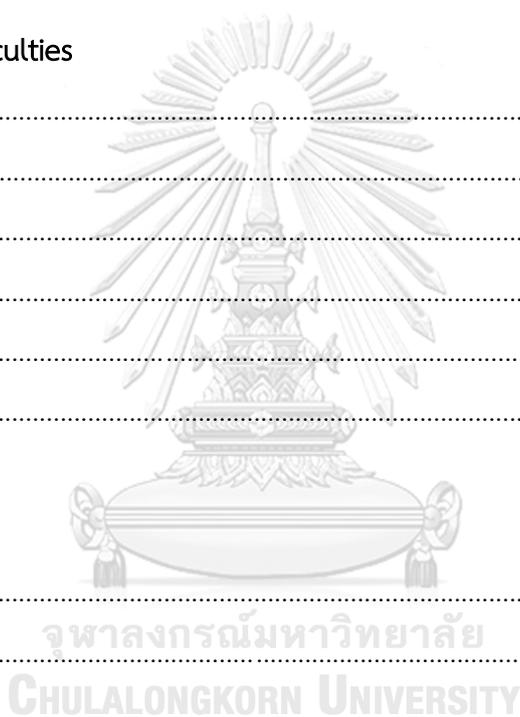
Lesson Plan

Descriptive Paragraph: Gathering Ideas

English Reading-Writing 1   Grade 10   Foreign Language Department

1st Semester   50 minutes   Academic Year 2021

Instructor: Thanakorn Santanatanon

....

Standards and Indicators

Standard FL1.1: Understanding and ability in interpreting what has been heard or read from various types of media, and ability to express opinions with reasons

FL1.1 / Grade 10-12 / 4: Identify the main idea, analyze the essence, interpret and express the opinions from listening to and reading feature articles and entertainment articles, as well as provide the justifications and the examples for illustrations.

Standard FL1.3: Ability to speak and write about information, concepts, and views on various matters

FL1.3 / Grade 10-12 / 1: Speak and write to present data themselves / experiences, news / incidents, matters and various issues of interest to society.

Standard FL2.1: Appreciating the relationship between language and culture of native speakers and ability in using language appropriately

FL2.1 / Grade 10-12 / 1: Choose the language, tone of voice, gestures and manners appropriate to various persons, occasions and places by observing social manners and culture of the native speakers.

Content

1. Writing strategies for gathering ideas: Brainstorming

Objectives

1. Students will be able to explain the purpose of brainstorming in the writing process.

2. Students will be able to use brainstorming to gather ideas.

3. Students will participate class participation.

Concepts

Brainstorming is writing down all the ideas without worrying about whether an idea is correct, or the writing is grammatically correct. For a descriptive paragraph, the ideas should be related to the five senses: sight, sound, smell, taste, and touch.

Assignments

1. Worksheet (Descriptive Paragraph: Gathering ideas)

Teaching Procedures

Outside-of-class

1. Students watch a video on YouTube "Brainstorming I Writing Process I Write Better in English" and prepare for in-class discussion about what they have learned from the video.

In-class (50 minutes)

2. The teacher asks students to discuss what they learn from the video with the following questions:

a. How is brainstorming important in the writing process?

b. Why should we write any ideas without worrying about the grammar or clarity?

3. The teacher shows an example paragraph "My Funny Friend" to students. Then the teacher asks them to read it by skimming through the text and respond to the text.

4. The teacher asks any students to think one of their friends and let them describe their friend like the example paragraph. After that, the students discuss which senses can be used to describe their friends.

5. The teacher asks students to pair with their classmate and lets them write down everything in their note in five minutes. After that, each pair tells each other about what they have written down in the note.

Outside-of-class

6. Students rearrange their ideas in their note and categorize them into senses in the worksheet. They may cross out some ideas that will not be used in their writing.

Assessment and Evaluation

Assessment	Measurement	Evaluation
Knowledge (K) - Purpose of brainstorming	- Class discussion	- Students are able to discuss and explain about the purpose of brainstorming in the class correctly at least 50 percent.
Psychomotor (P) - Using brainstorming for gathering ideas	- Worksheet (Descriptive Paragraph: Gathering Ideas)	- Students are able to select ideas and information about their classmate logically at least 70 percent.
Affection (A) - Class participation	- Observation form	- Students participant to class discuss at least 50 percent.

Media and Materials

1. A YouTube video: Brainstorming I Writing Process I Write Better in English

https://www.youtube.com/watch?v=EmS61qHyuaA

2. Worksheet

Name .... Class .... No. ....

Descriptive Paragraph: Gathering Ideas

Your Friend's Name:

....

Brainstorm area:
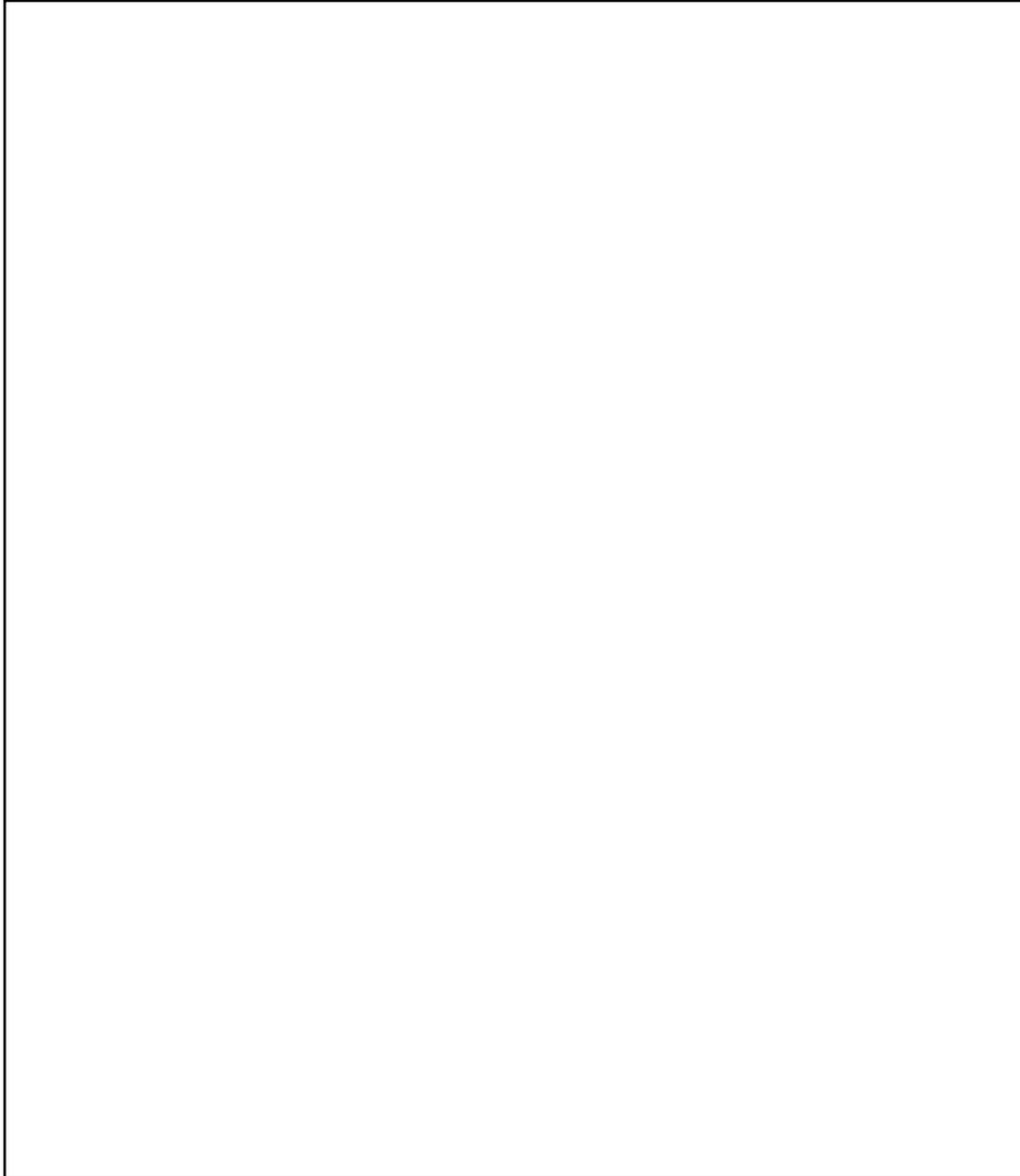
After-Teaching Report

1. Teaching Results

....

....
....
....
....
....

2. Problems / Difficulties

....
....
....
....
....
....

3. Suggestions

....
....
....
....
....
....

Instructor's signature ....

(....)

.... / .... / ....
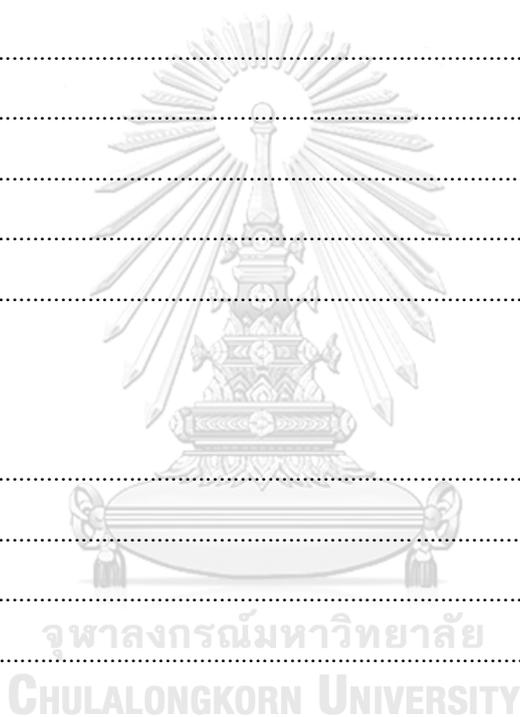
Lesson Plan

Descriptive Paragraph: Organizing Ideas and Turning Ideas into Written Texts

English Reading-Writing 1   Grade 10   Foreign Language Department

1st Semester   50 minutes   Academic Year 2021

Instructor: Thanakorn Santanatanon

....

Standards and Indicators

Standard FL1.1: Understanding and ability in interpreting what has been heard or read from various types of media, and ability to express opinions with reasons

    FL1.1 / Grade 10-12 / 4: Identify the main idea, analyze the essence, interpret and express the opinions from listening to and reading feature articles and entertainment articles, as well as provide the justifications and the examples for illustrations.

    Standard FL1.3: Ability to speak and write about information, concepts, and views on various matters

    FL1.3 / Grade 10-12 / 1: Speak and write to present data themselves / experiences, news / incidents, matters and various issues of interest to society.

    Standard FL2.1: Appreciating the relationship between language and culture of native speakers and ability in using language appropriately

    FL2.1 / Grade 10-12 / 1: Choose the language, tone of voice, gestures and manners appropriate to various persons, occasions and places by observing social manners and culture of the native speakers.

Content

    1. Writing strategies for organizing ideas: outlining

Objectives

    1. Students will be able to explain the purpose of outlining in the writing process.

2. Students will be able to organize the ideas about their classmate by outlining appropriately.

3. Students will participate class participation.

Concepts

Outlining lets the writers organize the ideas after brainstorming. In addition, it helps the writers see the rough organization of their writing. For a descriptive paragraph, the ideas should be organized based on the five senses or an impression of somebody or something.

Assignments

1. Worksheet (Descriptive Paragraph: Organizing ideas)

Teaching Procedures
Outside-of-class

1. Students watch a video on YouTube "Outlining I Writing Process I Write Better in English" and prepare for in-class discussion about what they have learned from the video.

In-class (50 minutes)

2. The teacher asks students to discuss what they learn from the video with the following questions:

    a. What is the purpose of outlining in the writing process?

    b. How is outlining important in the writing process?

3. The teacher shows an example paragraph "My Funny Friend" to students. Then the teacher asks them to skim through the text and identify how the ideas in the text are outlined.

4. The teacher shows a structure for outlining and asks students to outline the ideas from the brainstorming from the earlier class in the worksheet. Tell the

students to put a question mark if there are more details they would like to add later during outlining.

Outlining A	Outlining B
Topic Sentence:	Topic Sentence:
Sight:	Personality #1:
Example #1:	Example #1:
Example #2:	Example #2:
Smell:	Personality #2:
Example #1:	Example #1:
Example #2:	Example #2:
Concluding Sentence:	Concluding Sentence:

Outside-of-class

6. Students may ask their classmate some questions to add more details in and organize the ideas according to the outline in the class.

7. Students write their first draft according to their outline and submit it before the next class. **(Turning ideas into written text)**

Assessment and Evaluation

Assessment	Measurement	Evaluation
Knowledge (K) - Purpose of outlining	- Class discussion	- Students are able to discuss and explain

		about the purpose of outlining in the class correctly at least 50 percent.
Psychomotor (P) - Organizing ideas by outlining	- Worksheet (Descriptive Paragraph: Organizing ideas)	- Students are able to organize ideas and information about their classmate according to the structure at least 70 percent.
- Turning ideas into written text	- The first draft	- Students are able to write the text describing their classmate at least 150 words.
Affection (A) - Class participation	- Observation form	- Students participant to class discuss at least 50 percent.

Media and Materials

1. A YouTube video: Outlining I Writing Process I Write Better in English

https://www.youtube.com/watch?v=3sNaX75IYMU&t=311s

2. Worksheet

Name .... Class .... No. ....

Descriptive Paragraph: Organizing ideas

Outline the ideas after brainstorming below. Students can make some changes to the given structure to make it suitable for your writing.

Topic Sentence:

....

Appearance:

....

Example #1:

....

Example #2:

....

Personality #1:

....

Example #1:

....

Example #2:

....

Personality #2:

....

Example #1:

....

Example #2:

....

Concluding Sentence:
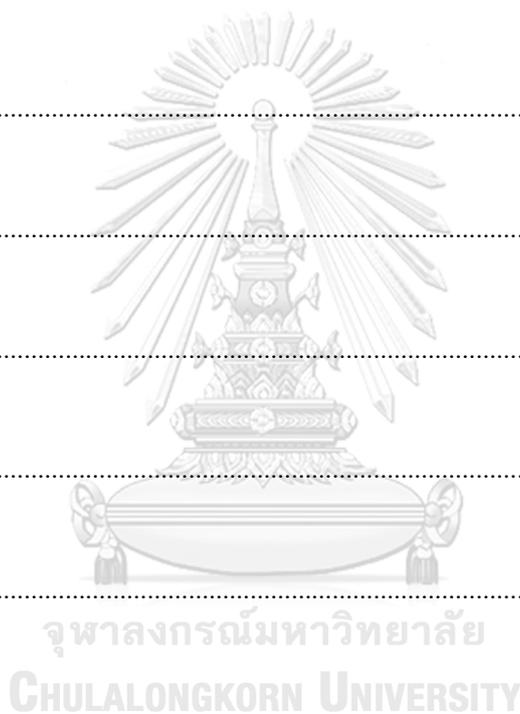
....

After-Teaching Report

1. Teaching Results

....

....

....

....

....

....

2. Problems / Difficulties

....

....

....

....

....

....

3. Suggestions

....

....

....

....

....

....

Instructor's signature ....

(....)

.... / .... / ....
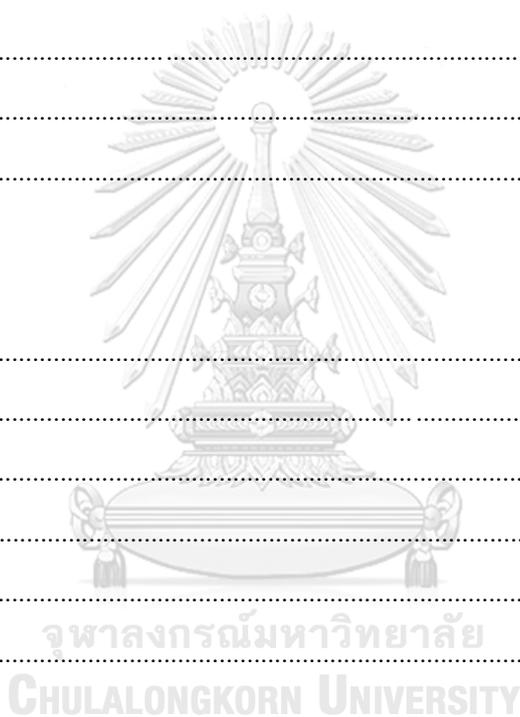
Lesson Plan

Descriptive Paragraph: Reviewing and Peer Editing

English Reading-Writing 1   Grade 10   Foreign Language Department

1st Semester   50 minutes   Academic Year 2021

Instructor: Thanakorn Santanatanon

....

Standards and Indicators

Standard FL1.1: Understanding and ability in interpreting what has been heard or read from various types of media, and ability to express opinions with reasons

FL1.1 / Grade 10-12 / 4: Identify the main idea, analyze the essence, interpret and express the opinions from listening to and reading feature articles and entertainment articles, as well as provide the justifications and the examples for illustrations.

Standard FL1.3: Ability to speak and write about information, concepts, and views on various matters

FL1.3 / Grade 10-12 / 1: Speak and write to present data themselves / experiences, news / incidents, matters and various issues of interest to society.

Standard FL2.1: Appreciating the relationship between language and culture of native speakers and ability in using language appropriately

FL2.1 / Grade 10-12 / 1: Choose the language, tone of voice, gestures and manners appropriate to various persons, occasions and places by observing social manners and culture of the native speakers.

Content

1. Writing strategies for reviewing the writing: ARMS strategy
2. Peer editing

Objectives

1. Students will be able to explain the purpose of reviewing in the writing process.

2. Students will be able to explain the purpose of peer editing in the writing process.

3. Students will be able to use ARMS strategy for reviewing the writing appropriately.

4. Students will be able to do peer reviewing critically.

5. Students will participate class participation.

Concepts

Reviewing the text is to make sure that the text includes the ideas that the writers want to express. The writers usually review the text for content and organization. Reviewing is useful to help them check the clarity of the text.

Peer editing is helpful for the writers to review the text. Sometimes the writers themselves are not aware of the weaknesses in their writing. Therefore, advices from friends can help them see what they need to improve their writing. It is necessary to give comments carefully not to hurt their feelings.

Assignments

1. Reorganizing the first draft and identify what ARMS strategies are used
2. Peer reviewing

Teaching Procedures
Outside-of-class

1. Students watch a video on YouTube "ARMS Revising" and prepare for in-class discussion about what they have learned from the video.

1st Period (50 minutes)
In-class

2. The teacher asks students to discuss what they learn from the video with the following questions:
a. What does "ARMS" stand for?

b. In your opinion, which strategy may be frequently used in your writing? Why?

3. The teacher shows an example paragraph "My Favorite Person" to students on PowerPoint. Then the teacher asks them to skim through the text and respond to the text as the readers with the following questions:

a. Is the content of the text consistent? Give some examples.

b. Is the text organized well? If not, give some examples.

4. The teacher lets students discuss together and explain how to revise the example paragraph "My Favorite Person" by using the ARMS strategies to add, remove, move, and substitute any parts of the text. The teacher makes changes on Microsoft Word as their suggestions.

Outside-of-class

5. Students review their first draft by using the ARMS strategies and identify which strategy they use to revise the text.

6. After reviewing the first draft, students prepare two drafts for the teacher and for peer reviewing next class.

7. Students watch a video on YouTube "How to be a Great Peer Editor: 7 Peer Review Tips" and prepare for in-class discussion about what they have learned from the video.

2nd Period (50 minutes)

8. The teacher lets students discuss what they learn from the video with the following questions:

a. What does the video suggest when you are a peer editor?

b. How should we give comments that do not hurt our friend's feelings?

9. The teacher shows an example paragraph "My Favorite Person" to students. Then the teacher gives each student a peer editing sheet and asks them to do a peer review according to the peer editing sheet.

10. The teacher asks students in each pair to send their draft after reviewing to their partner for peer editing and another one to the teacher. After that, the students give comments about their friend's draft in the peer editing sheet.

11. The teacher gives content feedback on the students' draft and return it back to them.

Outside-of-Class

11. Students revise their draft according to the teacher's and the peer's suggestions and submit the second draft to the teacher.

Assessment and Evaluation

Assessment	Measurement	Evaluation
Knowledge (K) - Purpose of reviewing in the writing process	- Class discussion	- Students are able to discuss about the purpose of reviewing in the class correctly at least 50 percent.
- Reviewing strategies: ARMS strategy	- Class discussion	- Students are able to select appropriate ARMS strategy to revise the example paragraph correctly at least 70 percent.
Assessment	Measurement	Evaluation
Knowledge (K) - Peer editing	- Class discussion	- Students are able to

		discuss about how to do peer editing in the class correctly at least 50 percent.
Psychomotor (P) - Reviewing the first draft by using the ARMS strategy	- Student's draft	- Students are able to review their first draft by using the ARMS strategy appropriately and identify what type of ARMS strategies they use correctly at least 70 percent.
- Peer editing	- A peer editing sheet	- Students are able to give helpful feedback about their friend's draft appropriately at least 70 percent.
Affection (A) - Class participation	- Observation form	- Students participant to class discuss at least 50 percent.

Media and Materials

1. YouTube videos:

1.1 ARMS Revising

https://www.youtube.com/watch?v=JzoK4FoVyuY

1.2 How to be a Great Peer Editor: 7 Peer Review Tips

https://www.youtube.com/watch?v=nXWTSPExYoc

2. Worksheet (A peer editing sheet)

Name .... Class .... No. ....

Descriptive Paragraph: Peer Editing Sheet (Reviewing)

Read your peer's first draft and check the paragraph based on this guideline.

PLEASE WRITE IN ENGLISH.

1. Is there a topic sentence in the paragraph? ☐ Yes ☐ No

If you can find the topic sentence, write it here.

....

Is it a good topic sentence? ☐ Yes ☐ No

If you answered **no**, give your friend some advice.

....

....

2. How many sentences does the paragraph have? .... sentences

How many words does the paragraph have? .... words

Does the paper have one paragraph? ☐ Yes ☐ No

3. Do all the sentences relate to the same topic? ☐ Yes ☐ No

If any sentence is not about the topic, write it here.

....

....

....

....

4. Can you understand the meaning of every sentence? ☐ Yes ☐ No

If you answered **no**, write the unclear sentence(s) here.

....

....

....

....

5. Is the paragraph indented? ☐ Yes ☐ No

6. Is there a concluding sentence in the paragraph? ☐ Yes ☐ No

If you can find the concluding sentence, write it here.

....

7. If you have ideas or suggestions for making the paragraph better, write them here.

....

....

....

....

....

....

After-Teaching Report

1. Teaching Results

....
....
....
....
....
....

2. Problems / Difficulties

....
....
....
....
....
....

3. Suggestions

....
....
....
....
....
....

Instructor's signature ....

(....)

.... / .... / ....

Lesson Plan

Descriptive Paragraph: Editing

English Reading-Writing 1   Grade 10   Foreign Language Department

1ˢᵗ Semester   50 minutes   Academic Year 2021

Instructor: Thanakorn Santanatanon

....

Standards and Indicators

Standard FL1.1: Understanding and ability in interpreting what has been heard or read from various types of media, and ability to express opinions with reasons

       FL1.1 / Grade 10-12 / 4: Identify the main idea, analyze the essence, interpret and express the opinions from listening to and reading feature articles and entertainment articles, as well as provide the justifications and the examples for illustrations.

       Standard FL1.3: Ability to speak and write about information, concepts, and views on various matters

       FL1.3 / Grade 10-12 / 1: Speak and write to present data themselves / experiences, news / incidents, matters and various issues of interest to society.

       Standard FL2.1: Appreciating the relationship between language and culture of native speakers and ability in using language appropriately

       FL2.1 / Grade 10-12 / 1: Choose the language, tone of voice, gestures and manners appropriate to various persons, occasions and places by observing social manners and culture of the native speakers.

Content

       1. Writing strategies for editing the writing: Reading backwards

       2. Coded feedback

Objectives

       1. Students will be able to explain the purpose of editing in the writing process.

2. Students will be able to describe the coded feedback correctly.

3. Students will be able to find their own errors in spelling and punctuation by using reading backwards.

4. Students will be able to correct grammatical errors in their text according to the coded feedback correctly.

5. Students will participate class participation.

Concepts

Editing refers to checking language accuracy in their writing. It is important that a writer can proofread the writing independently. One of the strategies for editing the text is reading backwards. It is a strategy that is used by the journalists to help them check spelling and punctuation. Reading backwards can be done by word by word or sentence by sentence. This technique can help the writers not think about the ideas much.

Coded feedback in this lesson focuses on word choice (WC), verb tense (VT), verb form (VF), word form (WF), article (ART), pronoun (PRO), run-on sentence (RO), fragments (F), singular and plural (SP), sentence structure (SS), and subject and verb agreement (SV).

Assignments

1. Editing the second draft

Teaching Procedures

1st Period

Outside-of-class

1. Students watch a video on YouTube "Proofreading Your Work | English Study Tip" and prepare for in-class discussion about what they have learned from the video.

In-class (50 minutes)

2. The teacher asks students to discuss what they learn from the video with the following questions:

    a. What is the purpose of editing in the writing process?

    b. What should we focus when we are editing the text?

3. The teacher shows an example paragraph "My Favorite Person" to students on PowerPoint. Then the teacher asks them to review each short parts of the paragraph on the worksheet by reading backward. Students try to identify the problem about the spelling and punctuation and correct the sentences.

4. The teacher introduces the coded feedback and explains what they refer to the students.

5. The teacher gives out the guideline and asks students to review it. The teacher may explain the coded feedback more if the students have any questions or ask for more clarification.

6. The teacher tells the students that they may consult the teacher or use English grammar books or websites for details if they have difficulty in editing particular errors.

7. The teacher shows examples of the coded feedback on PowerPoint and asks students to identify what it refers to.

8. The teacher gives the coded feedback on the student's second draft and return it to them for editing errors in the text.

Outside-of-class

9. Students edit their errors in spelling and punctuation by reading backward and grammatical errors according to the coded feedback. Then, when they finish editing, they submit the final draft to the teacher.

2nd Period (50 minutes)

In-class

1. Students take a writing post-test on the Google Form for fifty minutes.

Assessment and Evaluation

Assessment	Measurement	Evaluation
Knowledge (K) - Purpose of editing in the writing process	- Class discussion	- Students are able to discuss about the purpose of editing in the class correctly at least 50 percent.
- Editing strategies: Reading backwards	- Worksheet	- Students are able to correct errors in spelling and punctuation in the example paragraph correctly at least 70 percent.
- Coded feedback	- Class discussion	- Students are able to identify what the coded feedback refers to correctly at least 70 percent.

Assessment	Measurement	Evaluation

Psychomotor (P)		
- Editing the second draft	- Student's draft	- Students are able to edit their second draft by reading backward to correct spelling and punctuation correctly at least 70 percent. - Students are able to correct the grammatical errors in their second draft according to the coded feedback correctly at least 70 percent.
Affection (A) - Class participation	- Observation form	- Students participant to class discuss at least 50 percent.

Media and Materials

      1. YouTube videos:

          1.1 Proofreading Your Work | English Study Tip

          https://www.youtube.com/watch?v=64N6Ti2oHKl

      2. Worksheet

Name .... Class .... No. ....

Descriptive Paragraph: Editing

Read the following text and correct the spelling and punctuation by reading backward.

When I saw him on my friend phone for the first time he looked so kind softly and really friendly. When he smiles, it makes people who have a bad day have a good day. He is really handsame. All of his body looks perfect. Suddenly his leg is very long because he is 180 cm tall He is just not good at his face or all of his body. He has a tarent. He can play piano, sing, dance, acting, and yes he's my definition of perfection He's Korean, but when he was young, he lived in the usaso he was really good at English. Actually he is a boy band in Korea, we all call it K-Pop The name of his boy brand is NCT and his unit that his in is Nct127 and Nctu. When I first saw him on my friend phone, I just know that yes this man that I gonna buy a car for him lmao Actually I don't have money to do that, but now I have already bought his photocard. It's very cute and expensive, but it's not a problem because he is very cute. I hope one day when we all got vaccines, I gonna go to his concert and saw him face to face to see how handsome he is. This is my bambam who is my boyfriend eiei.

Coded Feedback Guideline

WC

| WC | Word Choice | He is interested <u>on</u> games. |
| | | => He is interested **in** games |

VT

| VT | Verb Tense | They <u>went</u> to school every day. |
| | | => They **go** to school every day. |

VF

| VF | Verb Form | I have <u>finish</u> my homework for two hours. |
| | | => I have **finished** my homework for two hours. |

WF

| WF | Word Form | She is <u>intelligence</u>. |
| | | => She is **intelligent**. |

Art

| Art | Article | I have brown dog. |
| | | => I have **a** brown dog. |

SP

| SP | Singular-Plural noun | We have many <u>sunglass</u>. |
| | | => We have many **sunglasses**. |

Pro

| Pro | Pronoun | I and <u>her</u> are siblings. |
| | | => I and **she** are siblings. |

RS

RS	Run-on sentence	<u>She is pretty she is polite</u>.
		=> She is pretty, and she is polite.
		=> She is pretty. She is polite.

F

F	Fragment	<u>He handsome.</u>
		=> He is handsome.

<div align="center">SS</div>

SS	Sentence structure	I like her <u>black long straight</u> hair.
		=> I like her long straight black hair.

<div align="center">SV</div>

SV	Subject-Verb	A lot of children <u>loves</u> swimming.
	Agreement	=> A lot of children love swimming.

After-Teaching Report

1. Teaching Results

....

....

....

....

....

....

2. Problems / Difficulties

....

....

....

....

....

....

3. Suggestions

....

....

....

....

....

....
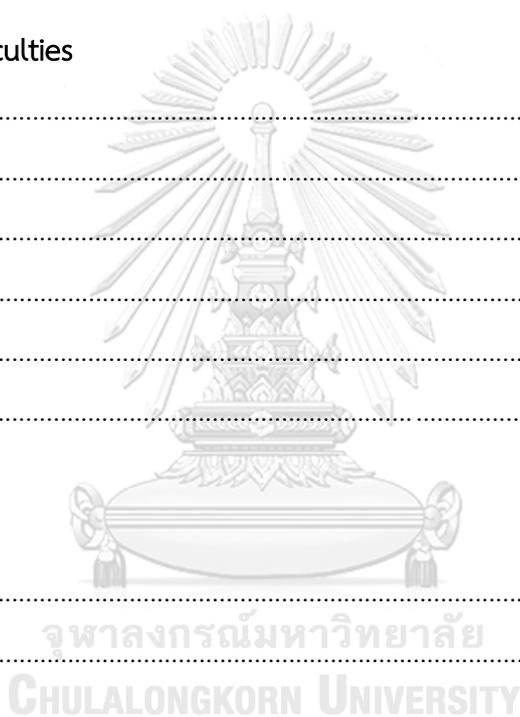
Instructor's signature ....

(....)

.... / .... / ....

VITA

NAME   Thanakorn Santanatanon

DATE OF BIRTH   24 June 1996