
摘要: 在二语习得领域中, 书面纠正性反馈一直是写作方面国内外学者研究的热门话题。尤其是近二十多年来, 越来越多的学者开始关注哪些因素影响学习者参与纠正性反馈, 以及学习者是如何在情感、认知和行为上参与教师书面纠正性反馈的。尽管一些影响二语学习者参与书面纠正反馈的学习者因素和语境因素已经被确定, 但还有一些因素还未被发现。而且, 鲜有研究关注这些因素是如何影响学习者在 EFL 课堂上对书面纠正性反馈的参与。此外, 国内关于书面纠正性反馈的个案研究也比较少, 尤其是在学生参与这方面。

基于此现状, 本研究旨在从语言学习的生态学视角出发, 对学生参与教师书面纠正性反馈的情况进行个案研究。本研究选取了南充市某高中高二的三名不同语言水平的学生作为研究对象, 历时十二周, 探讨了: (1) 哪些学习者因素影响学生参与教师书面纠正性反馈; (2) 哪些语境因素影响学生参与教师书面纠正性反馈; (3) 这两种因素是如何共同影响学生参与教师书面纠正性反馈的。数据收集自多种资源, 包括学生的回顾性口头报告、半结构化访谈、学生的初稿和修改稿以及带有教师纠正性反馈的文字稿。

研究发现影响学生参与教师书面纠正性反馈的学习者因素可以分为: (1) 与能力相关的因素: 语言能力、先前的英语知识、元语言学知识等; (2) 与意愿相关的因素: 学习者的信念、学习目标和动机等。语境因素可以分为: (1) 文本层面的因素: 书面纠正性反馈的特点和错误的特点等; (2) 人际和互动层面的因素: 人际关系和师生交流等; (3) 教学层面因素: 教师教学和课程目标等; (4) 社会文化层面: 师生的角色和普遍认同的学习策略等。虽然从文本层面到广泛的社会文化层面的语境里, 存在学生可以发挥能动性的学习资源, 但学生对教师书面纠正性反馈的参与取决于其是否能够并愿意感知和使用这些学习机会。因此学生参与教师书面纠正性反馈可以理解为学习者的参与包括积极构建他们与周围环境之间的关系。当学习者表现出愿意探索通过不同渠道提供给他们的各种学习机会时, 这种关系就会出现, 例如教师指导、互联网、家庭成员、同龄人等等。研究表明, 学习者对教师书面纠正性反馈的参与, 可以被概念化为感知书面纠正性反馈所提供的学习机会并对其采取行动的过程, 并强调了在语境给养和学习者能动性之间建立一致性以增强学生对教师书面纠正性反馈的参与。

关键词: 教师书面纠正性反馈; 学生的参与; 学习者能动性; 生态视角

Abstract: In the field of second language acquisition, written corrective feedback (hereinafter referred to as WCF) has been a popular topic in writing research among scholars both at home and abroad. Over the last 25 years, an increasing number of scholars have directed their attention toward identifying the factors that impact learners' engagement with corrective feedback, as well as examining the affective, cognitive, and behavioral effects of teacher's WCF on learners. Despite identifying some learner and contextual factors that impact second language learners' engagement with teacher's WCF, there has been limited research exploring how these factors influence students' engagement with teacher's WCF in EFL classrooms. In addition, case studies are scarce on written corrective feedback in China, particularly regarding examining students' engagement.

Based on this current situation in the research field, this study aimed to conduct a case study of students' engagement with teacher's WCF from an ecological perspective of language learning. Three students of grade two with different language proficiency levels from a senior high school in Nanchong city were selected for this study, which lasted for twelve weeks, to investigate: (1) what learner factors will influence students' engagement with teacher's WCF; (2) what contextual factors will influence students' engagement with teacher's WCF; (3) how do these two types of factors together influence students' engagement with teacher's WCF. Data were collected from a variety of sources, including retrospective verbal reports, semi-structured interviews, students' first and revised drafts, and teacher on-script WCF.

The study found that the learner factors that affect students' engagement with teacher's WCF can be divided into: (1) capacity-related factors: language ability, prior knowledge of English, and meta-linguistic knowledge; (2) willingness-related factors: learner beliefs, goals, and motivation. Contextual factors can be divided into: (1) textual level factors: the characteristics of WCF and the characteristics of errors; (2) the interpersonal and interactional level factors: the interpersonal relationship and the interaction between the teacher and the student; (3) the instructional level factors: the teacher's instruction and the curricular goals; (4) the sociocultural factors: the role of teachers and students and widely accepted learning strategies. While there are learning resources in contexts ranging from the textual level to the broad sociocultural level where students can exercise agency, students' engagement with teacher's WCF depends on their ability and willingness to perceive and utilize these learning opportunities. It

can be comprehended that learners' engagement involves the active construction of relationships between themselves and their surroundings. This relationship arises when learners demonstrate a willingness to explore various learning opportunities that are made available to them through different channels, such as teacher instruction, the internet, family members, peers, and more. The findings suggest that students' interaction with written corrective feedback can be understood as a progression of recognizing and utilizing the inherent learning possibilities offered by such feedback, and highlight the importance of creating congruence between contextual affordances and learner agency to enhance students' engagement with teacher's WCF.

Keywords: teacher's written corrective feedback; students' engagement; learner agency; ecological perspective

Contents

摘要:	i
Abstract:	ii
Chapter One Introduction	1
1.1 Research Background	1
1.2 Research Purpose and Significance	2
1.3 Organization of the Thesis	4
Chapter Two Literature Review	5
2.1 Definition of Basic Concepts	5
2.1.1 Written Corrective Feedback	5
2.1.2 Types of Written Corrective Feedback	6
2.1.3 Ecology	9
2.2 Theoretical Foundations	9
2.2.1 Output Hypothesis	9
2.2.2 Interaction Hypothesis	10
2.2.3 Sociocultural Theory	11
2.3 Previous Studies on Written Corrective Feedback	13
2.3.1 Studies on the Concept of Students' Engagement	13
2.3.2 Studies on Students' Engagement with Written Corrective Feedback	16
2.3.3 Studies on Mediating Factors of Students' Engagement	17
2.3.4 Studies on the Ecological Perspective in Language Learning	19
Chapter Three Research Methodology	22
3.1 Research Questions	22
3.2 Research Methods	22
3.3 Research Context and Participants	23
3.3.1 Research Context	23
3.3.2 The Teacher and Writing Assignments	24

3.3.3 Students	25
3.4 Research Instruments	25
3.4.1 Retrospective Verbal Reports	25
3.4.2 Semi-structured Interview	26
3.4.3 Text Analysis	26
3.5 Data Collection and Analysis	30
Chapter Four Results and Discussion	34
4.1 Results of Three Cases	34
4.1.1 The Case of Li	34
4.1.2 The Case of Qiu	38
4.1.3 The Case of Zeng	41
4.2 Discussion	45
4.2.1 Learner Factors Influencing Students' Engagement with Teacher's WCF	45
4.2.2 Contextual Factors Influencing Students' Engagement with Teacher's WCF	47
4.2.3 Learner Factors and Contextual Factors: the congruity between willingness and capacity	49
4.2.4 Exploring Students' Engagement with Teacher's WCF from an Ecological Perspective	52
Chapter 5 Conclusion	55
5.1 Major Findings	55
5.2 Pedagogical Implications	56
5.3 Limitations and Suggestions	57
References	59
Appendix I Instructions of Retrospective Verbal Report	66
Appendix II Analytic Framework of Errors	67
Appendix III Interviews	68
Appendix IV Writing Assignments	71
Acknowledgements	73

Chapter One Introduction

In high school English teaching, teacher's Written Corrective Feedback (hereinafter referred to as WCF) plays a crucial role in the improvement of students' writing skills. This chapter provides an overview of the research background, outlines the study's objectives and significance, and concludes with the research framework for the paper.

1.1 Research Background

In English language learning, the development of language proficiency is a primary focus, and writing skills are given great emphasis. *The New Curriculum Standard* for Regular High School (2017 Edition Revised in 2020) identifies listening, speaking, reading, viewing, and writing as the five fundamental language skills. Among these skills, writing is considered to be a crucial indicator of students' overall language proficiency. However, writing has been a weakness for most Chinese students. With the introduction of methods such as the continuation task and process writing, teacher's feedback has become a key part of the writing research. Teacher's feedback is an essential factor in enhancing students' writing performance during the writing process. To enhance students' writing performance, teachers must broaden their understanding of feedback, diversify corrective feedback techniques, and offer prompt and sufficient feedback to their students. *The New Curriculum Standard* mandates that students possess a particular level of linguistic awareness and language proficiency, enabling them to utilize written and oral language proficiently to communicate with others. Additionally, students should be capable of integrating and applying their language knowledge to comprehend written and spoken texts in both general and specific contexts (Ministry of Education of the People's Republic of China 2018).

The present study posits that students' engagement with feedback includes three interconnected aspects: affective, cognitive, and behavioral dimensions. However,

students' engagement with written feedback has been an under-researched issue (Koltovskaia, 2020; Zhang, 2020). Studies conducted in a contextualized setting have consistently demonstrated the intricate and multifaceted nature of learners' interaction with written corrective feedback (WCF), with various learner and contextual factors influencing the process. (Han & Hyland, 2015; Ferris et al., 2013; Zhang & Hyland, 2018; Zheng & Yu, 2018). Although these factors such as teacher-student relationship, learner proficiency level, and feedback focus have been identified and studied (e.g., Cheng & Liu, 2022; Liu, Storch & Morton, 2022; Zhang & Hyland, 2018; Zheng & Yu, 2018), the crux of the problem namely how learner and contextual factors influence learners' engagement in authentic classrooms, remains underexplored.

A more comprehensive understanding of this matter can be achieved by adopting an ecological perspective on language learning. Such a perspective emphasizes the interdependence between individuals and their environment, while also recognizing the intricacy and diversity of the context (Leo, 1997, 2000, 2004), and rejecting the notion of a simplistic, linear relationship in language development (Anderson, 2016; Guerrettaz & Johnston, 2013; Kramersch, 2008). This perspective, however, has drawn little attention in the research of written corrective feedback. To address this issue, this paper employs an ecological perspective to analyze data gathered from a case study of senior high school students' English language learning in Nanchong, focusing on how learner factors and contextual factors combine to influence learners' engagement with WCF.

1.2 Research Purpose and Significance

After reviewing relevant literature both domestically and internationally, the author has identified that prior research has recognized a variety of learner and contextual factors that influence the extent of second language learners' engagement with written corrective feedback (WCF). Nevertheless, a comprehensive understanding of how these factors interact to affect learners' utilization of WCF in the second language classroom remains elusive and requires further exploration. To address this issue, this paper conducts a case study of students' interaction with WCF in a Nanchong high school from an ecological perspective on language learning and provides a discussion of the collected

data. Data were collected from a variety of sources, including retrospective verbal reports, semi-structured interviews, students' first and revised drafts, and teacher on-script WCF. The purpose of this study is to understand which learner factors and contextual factors influence students' engagement with written corrective feedback and to examine how these two factors together influence learners' engagement with written corrective feedback from an ecological perspective, thereby exploring the dynamics between learner factors and contextual factors and helping to explain individual differences in students' engagement with feedback. This study aims to help high school English teachers adapt written corrective feedback, instructional and other relevant teaching materials, and student-teacher interactions to students' proficiency levels so that even underachieving students can understand the teacher's feedback and instruction, thus enabling students to truly understand the teacher's written feedback and improve their English writing.

The *New Curriculum Standard* highlights the importance of “integrating teaching, learning, and assessment to promote effective teaching and learning.” Accordingly, teachers are required to conduct ongoing classroom assessment activities throughout the teaching process to evaluate the attainment of teaching goals, identify areas where students may be struggling, and provide timely assistance and feedback to facilitate more effective learning. (Ministry of Education of the People's Republic of China 2018). This requires high school English teachers to focus on meaningful interaction between teachers and students when giving feedback to promote the development of higher-level thinking and cultural awareness. At the same time, teachers should be careful not to give premature comments on what is right or wrong or good or bad and should pay attention to creating opportunities for students to reflect on themselves and self-regulation. Teachers should fully acknowledge students' efforts, politely point out areas for improvement and refinement, and provide immediate help for students learning difficulties. And in the teaching of second language writing, teacher's WCF is a crucial tool for improving the teaching and learning of English writing. Teacher's timely and effective feedback can significantly enhance students' English writing skills.

Therefore, this paper will explore the English learners' engagement in language communication in a high school in Nanchong from an ecological perspective, by redefining the concept of learners' engagement, to investigate the influence of learner and

contextual factors on the utilization of WCF in real classroom environment, thereby contributing to the field of language communication research.

1.3 Organization of the Thesis

In brief, the present study aims to examine what learner factors and contextual factors influence students' engagement with teacher's WCF and how those two sets of factors come together to influence students' engagement with teacher's WCF.

The whole thesis covers six chapters. Chapter one primarily provides an overview of the research background, objectives, theoretical and practical implications related to the teaching of English writing, and teacher's written correction feedback.

Chapter two of this paper is a literature review that consists of three sections. The first part is the presentation of definitions of WCF and the typology of WCF. The second part mentions the theoretical foundations that are relevant to this study. The third section is a review of pertinent domestic and international literature that focuses on the construct of students' engagement, their engagement with teacher's WCF, as well as the mediating factors that influence their engagement.

Chapter three outlines the methodology employed in the present study. It includes the research question, research context and participants, research methods and instruments, data collection procedures, and analysis techniques employed in the present study.

Chapter four presents the findings of the data collected from various sources. It mainly contains two sections. The first section is a detailed description of the cases of Li, Qiu and Zeng. The final section is a detailed discussion based on each of the three research questions.

Chapter five summarizes the primary findings of the study and presents insightful pedagogical implications for high school English teaching. Additionally, chapter five acknowledges the limitations of the current study and offers valuable suggestions for future research.

Chapter Two Literature Review

This chapter builds the foundation for the whole study. First, it presents the definitions of WCF and the typology of WCF. Then, it mentions relevant theoretical foundations: the Output Hypothesis, the Interaction Hypothesis, and the Sociocultural Theory. Lastly, this paper reviews the findings of prior research conducted domestically and internationally on students' engagement, factors that influence their engagement with WCF, and ecological perspectives on language learning. The paper then highlights the insights and limitations of prior research.

2.1 Definition of Basic Concepts

This section briefly describes the different types of written corrective feedback that are directly relevant to this paper.

2.1.1 Written Corrective Feedback

Written corrective feedback (WCF), which is also called error feedback, error correction, or grammar correction (Lee, 2004; Truscott, 1996), refers to feedback on language errors for the purpose of developing students' written accuracy (Bitchener & Ferris, 2012; Bitchener & Storch, 2016). WCF is one form of corrective feedback that includes both oral and written corrective feedback. Corrective Feedback, or negative evidence, is feedback given by the teacher when a student uses the target language incorrectly (Keh, 1990). Early research on corrective feedback was relatively focused in its purpose and consisted mainly of discussions about the effectiveness of corrective feedback, with the most heated debate between Truscott and Ferris about the need to correct grammatical errors in writing. Some scholars, such as Truscott (1996), have argued that corrective feedback is ineffective in real classroom environment and could even have serious negative effects. They suggest that teachers should abandon corrective feedback on students' grammar and instead focus on the writing process, emphasizing the

learning properties of grammar; on the other hand, scholars, represented by Ferris (1999) who argued that Truscott's arguments for correcting grammatical errors were meaningless and too absolute.

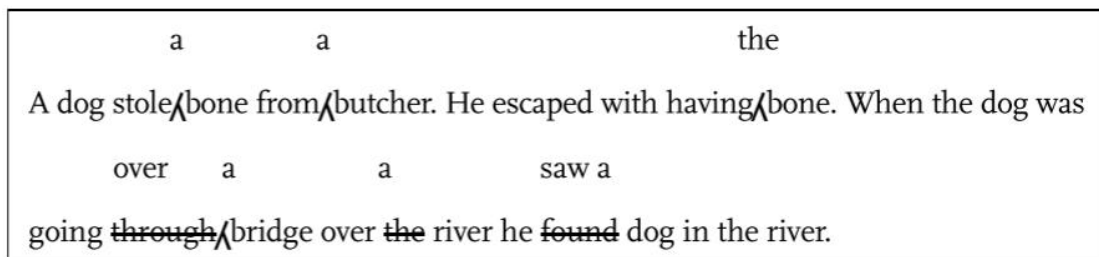
2.1.2 Types of Written Corrective Feedback

In real classroom, there are various methods for correcting students' errors. One of the well-known research on Corrective Feedback is conducted by Ellis. She categorizes the types of written corrective feedback into six distinct types, including direct corrective feedback, indirect corrective feedback, metalinguistic feedback, feedback focus, electronic feedback, and reformulation feedback. Teachers or lecturers should familiarize themselves with these six types of corrective feedback to enhance their ability to provide effective feedback to their students.

In terms of different strategies for teacher corrective feedback, Ellis (2009) provides a more comprehensive and specific classification based on a summary of previous research. The six types of corrective feedback are follows:

1) Direct CF: Direct corrective feedback (CF) involves the teacher directly providing students with the correct form of language. As Ferris (2006) suggests that direct CF has many different forms, such as crossing out an unnecessary word, phrase, or morpheme, inserting a missing word or morpheme, and writing the correct form above or near to the erroneous form (Hyland, Ken, 2006). Example 1 illustrates direct correction. Providing the correct language form or structure on or next to a language error is the definition of direct corrective feedback. (Bitchener, Young, & Cameron, 2005). Figure 2-1 illustrates how to direct WCF works:

Figure 2-1 Example of Direct CF (Ellis, 2009)



Ellis (2009) talks about how some researchers have argued that direct feedback is more appropriate for students with low language proficiency. However, direct feedback

requires the least amount of time and effort from the student and does not seem to have much effect on long-term learning.

2) Indirect CF: Indirect WCF refers that the teacher indicating or locating the errors. The teacher can underline, circle, and highlight the errors, but does not provide the correct form on or next to the errors, leaving the writer to correct them (Ferris and Barrie, 2001). Indirect CF contains indicating that an error exists without providing the correction for the students (Ellis, 2008) and motivates students to think about their errors (Hyland, Ken, 2006). In practice, teachers can generally take two approaches, a) pointing out the error + indicating where the error is located: usually underlining where the error is located or using a symbol to indicate where the students are missing; b) only indicating that errors exist: the teacher states in the margin that one or more errors exist on the line, but does not specify the location of the errors. Figure 2-2 illustrates how indirect CF works:

Figure 2-2 Example of Indirect CF (Ellis, 2009)

A dog stole X bone from X butcher. He escaped with XhavingX X bone. When the dog was going XthroughX X bridge over XtheX river he found X dog in the river.
 X = missing word
 X __X = wrong word

3) Metalinguistic CF: The teacher gives metalinguistic cues for students' errors. This can generally be done in two ways. a) Using error codes: The teacher gives the code corresponding to the type of error in the margin, e.g. ww= wrong word; art= article. Fig. 2-3 and fig.2-4 shows the practical applications. b) brief grammatical descriptions: at the end of the text, the teacher marks the errors and provides a grammatical explanation for each error. Figure 2-5 illustrates how Metalinguistic CF works:

Figure 2-3 Example of Metalinguistic CF: Using error codes and informing students of the location of the error (Ellis, 2009)

art.	art.	WW art.
A dog stole bone from butcher. He escaped with having bone. When the dog was		
prep.	art.	art.
going through bridge over the river he found dog in the river.		

Figure 2-4 Example of Metalinguistic CF: Using error codes without informing students of the location of the error (Ellis, 2009)

Art. x 3; WW	A dog stole bone from butcher. He escaped with having bone.
Prep.; art.	When the dog was going through bridge over the river he
Art.	found dog in the river.

Figure 2-5 Example of Metalinguistic CF: giving brief grammatical descriptions (Ellis, 2009)

(1)	(2)	(3)
A dog stole bone from butcher. He escaped with having bone. When the dog was		
(4)	(5)	(6)
going through bridge over the river he found dog in the river.		
<i>(1), (2), (5), and (6)—you need ‘a’ before the noun when a person or thing is mentioned for the first time.</i>		
<i>(3)—you need ‘the’ before the noun when the person or thing has been mentioned previously.</i>		
<i>(4)—you need ‘over’ when you go across the surface of something; you use ‘through’ when you go inside something (e.g. ‘go through the forest’).</i>		

4) The focus of the feedback: Whether the teacher chooses to correct all (or most) of the student’s errors or only one or two types of errors. This can be broken down into a) Unfocused feedback: a large number of broad-based corrections of all types of errors; b) Focused feedback: focusing on one or two types of errors.

5) Electronic feedback: the teacher highlights the location of the error and provides a hyperlink to an index file that contains the correct usage of the vocabulary.

6) Reformulation: where the native speaker rewrites the student’s entire text to make the language as authentic as possible, but without changing the original content.

Figure 2-6 Example of Reformulation (Ellis, 2009)

Original version:	As he was jogging, his tammy was shaked.
Reformulation:	As he was jogging, his tummy was shaking. tummy shaking
Error correction:	As he was jogging his tammy was shaked .

2.1.3 Ecology

The term “ecology” is considered by *the Modern Chinese Dictionary* to mean “the status of survival and development of organisms in a certain natural environment; it also refers to the physiological characteristics and living habits of organisms” (Contemporary Chinese Dictionary, 2002). The definition above highlights that ecology focuses on the relationship and interaction between individual organisms, as well as between organisms and their environment. Organisms and the environment are the fundamental components of this concept. The study of these two basic elements has evolved into a science - Ecology. The emergence of ecology marked a significant milestone in our history, and it has been extensively studied in virtually all regions where life exists. Since its inception, ecology has been closely linked to human production and life. In particular, as society has developed, ecological research methods have spread to all fields of life, becoming an important part of human scientific research and providing new perspectives for the development of other fields. This paper, therefore, examines and studies students’ engagement with Teacher’s Written Corrective Feedback from an ecological perspective.

2.2 Theoretical Foundations

In this section, three theories that are highly relevant to the study will be presented.

2.2.1 Output Hypothesis

In 1985, Swain put forth the “Language Output Hypothesis”, building on Krashen’s “Language Input Hypothesis”. Swain’s theory places greater emphasis on the process and function of language output, contending that it has a beneficial effect on second language acquisition and learning. Swain drew on his years of experimental research on French immersion in Canada to assert that comprehensible language input alone is insufficient for language acquisition and learning. He argued that comprehensible language output is also necessary.

Swain proposed that language output serves three key functions in language acquisition: the noticing/trigger function, the hypothesis testing function, and the

metalinguistic function. According to Swain, the noticing/trigger function of language output involves directing the learner's attention to the target language during the learning and usage process. This function enables the learner to identify issues with the use of the target language and enhances their ability to process relevant linguistic input. Noticing the disparity between one's own mediated language and the target language provides learners with the opportunity to develop their own language system, among other benefits. Corrective feedback from the teacher can further enhance this possibility. The hypothesis testing function of language output involves formulating and testing hypotheses about the target language during the language acquisition process. Swain suggests that language output is the most effective way to test these hypotheses. Corrective feedback from teachers on students' compositions enables learners to revise or update their output, abandoning inaccurate assumptions and making accurate ones. The metalinguistic function of language output involves learners utilizing their existing linguistic knowledge to analyze, describe, and reflect on the form and meaning of the language when producing it. In addition, producing a significant amount of language output facilitates the internalization of language knowledge and improves fluency in language use. Feedback should be provided in conjunction with the level of difficulty of input and the need to promote output, encouraging learners to actively produce language and eventually achieve a satisfactory level of proficiency.

2.2.2 Interaction Hypothesis

The interaction hypothesis is widely recognized as an expansion of Krashen's input hypothesis, developed by Long. The interaction hypothesis proposes that conversational interaction can enhance students' acquisition. It should be noted that Long's discourse interaction theory is centered on the cognitive adjustment of discourse structure by speakers with greater linguistic competence, and does not necessarily refer to interpersonal social interaction. (Zhao & Zhou, 2009).

The interaction hypothesis has been formulated in two stages, with the early one deriving mainly from Long's (1981) experiments in which native and non-native speakers were teamed up to complete a speaking task. Experimental results have demonstrated that both native and non-native speaker groups utilize more conversational strategies to

negotiate meaning and adapt discourse, facilitating language input for non-native speakers and enabling them to reach the “i+1” level, as described by Krashen. This process ultimately promotes language acquisition.

Critics of this version of the interaction hypothesis have argued that it places too much emphasis on the functional aspects of language and neglects its grammatical aspects. Furthermore, there is a lack of research on how interaction affects the development of grammatical competence. Subsequently, Long (1996) revised and updated the interaction hypothesis, resulting in a second stage version. This version focused more on the links between input and the language environment and intrinsic learner factors such as the learner’s selective attention and developing second language processing skills. At the same time, he pointed out that while positive feedback is the most direct way for learners to acquire language material, negative feedback obtained during meaning negotiation or other processes can facilitate second language development, at least at the level of lexical, morphological, and language-specific syntax. Moreover, such negative feedback is necessary when learners are learning certain specified monolingual and bilingual contrasts.

In summary, the adaptation of the interaction hypothesis highlighted the importance of interactive adaptation of comprehensible input and meaning negotiation, as well as the role of negative feedback in language acquisition. Although interaction research is currently focused on the oral level, its theoretical framework can be applied to written feedback just as well. Teacher’s corrections are the equivalent of input in interaction, requiring not only positive feedback but also negative corrective feedback. How this input can be made to facilitate students’ second language acquisition is what we are looking at.

2.2.3 Sociocultural Theory

According to Vygotsky, all cognitive development, including language development, is a product of social interaction, particularly when learners are able to communicate with individuals who possess greater knowledge of the target language. (e.g. teachers and advanced learners). He believed that social culture is not only a supplement to individual behavior but also a foundation and a significant part of individual behavior. Human

psychology is in the ecological environment. Vygotsky believed that human development is intricately tied to the interaction between individuals and their environment. Vygotsky argued that individual thought and behavior, as well as the functioning of social organizations, are inextricably linked to the social and cultural context in which they exist. (Bao, 2010). This theory is very similar to Long's interaction hypothesis mentioned above, but is broader in scope; Long's Interaction Hypothesis emphasized the negotiation of meaning between interlocutors and the use of talk strategies to facilitate language acquisition in low-language learners. Vygotsky's Sociocultural Theory, however, encompassed both interpersonal interactions and interactions with the environment, such as the classroom environment where learners interact not only with the teacher but also with their peers, the textbook, various aids, and so on.

Vygotsky introduced a significant concept known as the Zone of Proximal Development (ZPD). This refers to the gap between a child's current level of cognitive development (as determined by their ability to independently solve problems) and their potential level of cognitive development (as determined by their ability to solve problems with adult guidance or in collaboration with capable peers). The nearest developmental zone indicates the potential for cognitive development (Zhang, 2011). In order to stimulate learners' potential and to benefit their development, the teacher has a critical role in providing knowledge and experiences that are appropriately situated within the learner's most recent zone of development, thereby encouraging and facilitating learning. The most effective and efficient teaching should therefore go beyond the individual learner's current level, but not too far beyond.

Bruner's scaffolding' model of teaching is rooted in the theory of ZPD. scaffolding, in simple terms, is a form of help that enables learners to traverse their nearest developmental area. The term "scaffolding" is a metaphor that draws comparisons to the use of physical scaffolding in construction work and is now used to describe how teachers can facilitate a move from passive to independent learning by taking control of those elements of the task that are beyond the student's ability so that students can focus on the content of the task that is within their ability and master it quickly (Ma & Ye, 2004) . Scaffolding can be seen as a form of assistance, or as a teaching strategy. In essence, the scaffolding approach involves the teacher providing assistance to students

when they are not yet capable of completing challenging tasks independently, ensuring that they remain in their own zone of most recent development when completing tasks.

Of course, Vygotsky's theory is very rich in content and leads to many concepts and applications, of which the above are just a few very well-known examples. These theories and concepts highlight the importance of learners engaging in interactions with their teacher, peers, and environment to improve their language skills, and that corrective feedback from the teacher can be seen as an object of interaction that is indispensable for learners to improve their skills. This feedback, which can also be seen as a kind of scaffolding, is why teachers should also take the students' level into account when giving feedback. It is essential to provide students with feedback that is situated within their nearest developmental zone when engaging in error correction tasks. In a nutshell, these theories and concepts of Vygotsky illustrated that error correction feedback is necessary, and that there are requirements for how and what can be given to students. In other words, teachers should consider the student's current level when giving feedback and should not give feedback that is more difficult than the students' ZPD; only if it falls within the ZPD can it be effective in improving the student's language skills. This view was echoed and supported by other scholars (e.g., Lantolf & Aljaafreh, 1995; Ohta, 2000, etc.).

These theories all suggest that teacher feedback can prompt students to notice deficiencies in their output. Moreover, feedback from the teacher first and then correction by the student is an interactive activity that can prompt learning to occur and improve students' second language skills.

2.3 Previous Studies on Written Corrective Feedback

After describing the overall picture of WCF in the previous section, the paper will review previous research on WCF in detail to identify gaps that need further study.

2.3.1 Studies on the Concept of Students' Engagement

Engagement pertains to how learners react to the feedback they receive, and is impacted by both individual and contextual factors (Ellis, 2010). "Students' engagement" can also be interpreted as "student involvement" or "learning participation", "learning

engagement”, etc. According to Austin, “there is no essential difference between engagement and involvement” (Austin, 1984). Therefore, the terms “student involvement” and “student input” are not necessarily contradictory in their usage. Since the Modern Chinese Dictionary defines “participation” as “taking part in planning, discussing, and dealing with” (Contemporary Chinese Dictionary, 2002), which better reflects the dynamic process of students’ participation in academic activities, this study adopts the term “students’ engagement” as the core concept.

The definition of “students’ engagement” has undergone a gradual transformation from an initial emphasis on quantity to a focus on quality.

The first foreign scholar to introduce the concept of students’ engagement was Kuhn, who defined it as “the time and energy that students devote to meaningful learning activities” in his article “*Assessing what really matters to student learning.*” (Chen & Zhang, 2013). In the seminal literature “*Student Engagement and Achievement in American Secondary Schools,*” Newmann F. defines “students’ engagement” as “the cognitive engagement and effort of students that is aimed at acquiring, comprehending, or mastering knowledge, skills, or techniques facilitated by a learning program.” (Liu, 2012). It can be noticed that the understanding of the concept of “students’ engagement” has evolved from an emphasis on student’s time commitment to an emphasis on the quality of their engagement.

The interpretation of “students’ engagement” can be approached not only as “quality” and “quantity” but also as “process” and “outcome.” Some scholars, focusing on the process level, contend that “students’ engagement” pertains to “the active involvement of students in educational and instructional activities, guided by teachers, to achieve the construction and development of students’ subjectivities” (Zhao, 2002). In this specific setting, the engagement of students refers to the extent to which they involve themselves in meaningful learning pursuits that facilitate their own progress and personal growth. When examining the results of student engagement, the focus is primarily on their academic accomplishments and how they relate to the level of engagement demonstrated by the students themselves. The emphasis is placed on the outcomes that are directly attributable to their engagement in learning activities. (Zepke, 2010). It is important to recognize that analyzing students’ engagement solely at the level of either “process” or

“outcome” may not provide a comprehensive understanding, and thus, a more reasonable approach would be to consider both levels in combination.

Fredricks et al. (2004) propose a conceptualization of students’ engagement that consists of three interconnected dimensions: behavioral, emotional, and cognitive. When referring to the dimension of behavioral engagement, it pertains to desirable behaviors exhibited by students in the classroom and school setting. This includes active involvement in academic tasks, positive conduct during class time, and active participation in extracurricular activities. The dimension of emotional engagement involves the affective responses of students within the school environment. This encompasses a range of emotions. The dimension of cognitive engagement relates to the psychological investment that students make in their own learning. This involves strategic learning approaches, such as critical thinking, analyzing information and problem-solving skills, which are implemented by the students to enhance their understanding of academic content (Zhang & Hyland, 2018). The three dimensions of engagement are interconnected in a dynamic manner, as they consist of both cognitive and emotional elements that have an impact on human behavior. These dimensions work together to influence how students think, feel, and behave within the school environment. (Pessoa, 2008).

Specifically, affective engagement is defined as students’ attitudes toward feedback (Ellis, 2010; Han, 2017), which can be investigated from interest, value, and affect (Fan & Xu, 2020; Kahu, 2013). We can rephrase the statement as follows: The term “interest” refers to the extent to which students are willing to receive written feedback from their teachers. Meanwhile, “value” pertains to their perceptions about the usefulness of such feedback. Finally, “affect” denotes their emotional responses upon receiving feedback.

Behavioral engagement refers to students’ behaviors after receiving feedback, namely what they do with the feedback (Ellis, 2010; Han & Hyland, 2015). More specifically, it focuses on the revision operations they conduct and the strategies they utilize to respond to the feedback (Koltovskaia, 2020; Zhang, 2017; Zheng & Yu, 2018).

Cognitive engagement refers to students’ cognitive investment while responding to feedback (Ellis, 2010; Zhang, 2020). In line with the previous studies (e.g., Fan & Xu, 2020; Han & Hyland, 2015; Yu et al., 2019), this construct in our study is manifested in

students' awareness of teacher written feedback (noticing and understanding). We can rewrite the statement as follows: Students employ cognitive operations to aid them in revising their work, and they also use meta-cognitive strategies to manage their mental effort when processing feedback. The three components are considered as the sub-constructs under the cognitive dimension, interacting to influence students' engagement with teacher-written feedback in cognition.

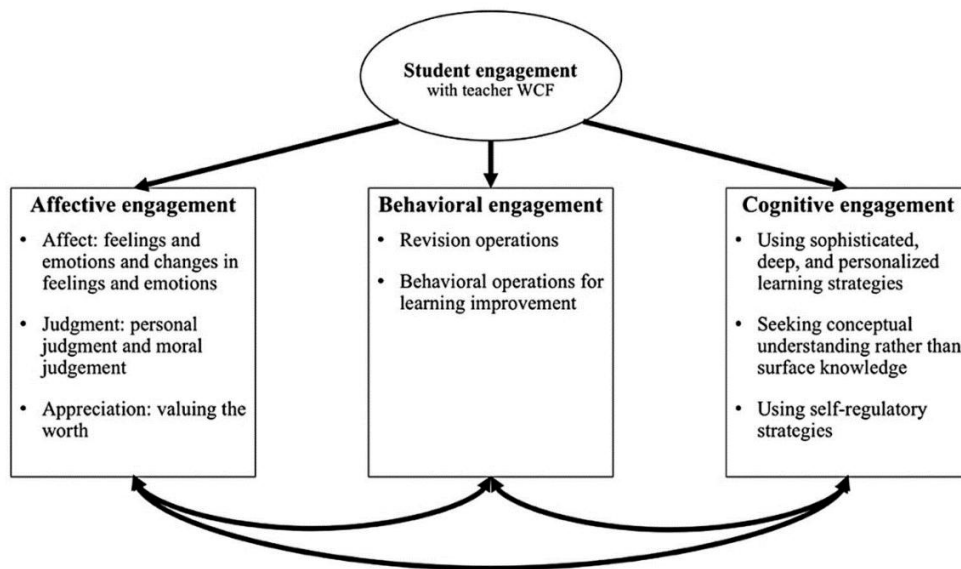
We can rephrase the statement as follows: The study defines students' engagement in writing-related activities as the result of their physical and mental efforts, encompassing cognitive, affective, and behavioral aspects. The integration of these perspectives facilitates a thicker description of students' engagement with teacher written feedback than a single lens (Yu et al., 2019; Zhang & Hyland, 2018). This multi-dimensional framework should be able to establish a comprehensive picture of how L2 learners with different language proficiency capitalize on teacher written feedback (Cheng & Liu, 2022).

2.3.2 Studies on Students' Engagement with Written Corrective Feedback

Previous studies have viewed students' involvement with WCF from different perspectives, such as learners' attitudes and beliefs (Ferris, 1995; Lee, 2004), editing practices (Ferris, 2006; F. Hyland, 2003), comprehension and integration (Storch & Wigglesworth, 2010), and utilizing feedback through tactics and self-evaluation (Ferris, Liu, Sinha, & Senna, 2013). Although Ellis (2010) put forward a broad framework for examining corrective feedback in both spoken and written contexts, it was not specifically tailored to the study of WCF. Han and Hyland (2015) suggested that Ellis's framework may require adjustments to accommodate the intricacy and specificity of learners' interactions with WCF for the following three reasons: Firstly, we need to consider that learners may have an easier time recognizing the corrective nature of WCF than they do with oral CF (Ellis, 2010; Sheen, 2010); Secondly, learners may employ cognitive strategies such as mental notation (Cohen & Cavalcanti, 1990; Ferris et al., 2013), memorization, and visualization (Sachs & Polio, 2007; Storch & Wigglesworth,

2010) to process feedback over time; Thirdly, learners' emotional responses to WCF may fluctuate during the revision process (Han & Hyland, 2015). We can understand students' engagement with teacher's WCF through the conceptual framework (see Figure 2-7), which has drawn upon the initial framework proposed by Zheng and Yu (2018) and has been further informed by Ellis (2010), Finn and Zimmer (2012), Han and Hyland (2015), and Martin and Rose (2002).

Figure 2-7 The Conceptual Framework of students' engagement with teacher's WCF (Zheng & Yu,2020)



2.3.3 Studies on Mediating Factors of Students' Engagement

Research has demonstrated that learners' involvement with WCF is a multifaceted and individualized process, shaped by both learner-specific and contextual factors (Ellis, 2010; Cheng & Liu, 2022; Murphy & Roca de Larios, 2010; Han & Hyland, 2015). Murphy and Roca de Larios' (2010) review article identified multiple learner factors affecting engagement with WCF, such as age, language aptitude, learning style, motivation, goals, and beliefs (Han, 2019). Hyland (1998) noted that learners' motivation, goals, and beliefs can shape their individual agenda, which may not necessarily coincide with that of the teacher. Consequently, learners may only superficially engage with WCF. Moreover, more advanced levels of second language proficiency and a broader repertoire of learning strategies may lead to a heightened comprehension of WCF and increased

efforts to seek assistance actively (Zhang & Hyland, 2018).

In addition to learner factors, contextual factors also greatly influence affecting engagement with WCF. Throughout previous research, contextual factors have been divided into different ways. There is a general agreement that WCF exists within various layers of contexts, which can be categorized into immediate, social, and cultural contexts (Han, 2019). These contextual factors can be observed at different levels, ranging from the broader macro level, such as ESL, EFL, immersion settings, and learning-to-write or writing-to-learn environments, to the more specific micro-level context like the classroom setting (Ellis, 2010; Murphy and Roca de Larios, 2010). Evans et al. (2010) differentiated three categories of variables in the context of WCF: learner variables (referring to the characteristics that the student brings to the learning experience), situational variables (encompassing all aspects that shape the learning environment both within and beyond the classroom, including institutional rationale and classroom atmosphere), and methodological variables (pertaining to the types of WCF provided to students). Among the contextual factors that influence students' engagement, school climate, curriculum, teachers, and family are cited as some of the more important influences (Mou, 2016). According to Dewey C et al. (2016), students' engagement in school is influenced by their perception of the school climate, and a negative school climate can significantly impede their engagement, ultimately affecting their academic performance. In addition to this, at the teacher level, teacher's teaching methods can also influence the level of students' engagement in the classroom. It can be found that the existing studies are relatively comprehensive in exploring the impact on students' engagement from the perspective of the environment.

However, there is little understanding of the impact of these contextual factors on learners' engagement (Han, 2019). Bitchener & Ferris (2012) reviewed studies over the past fifteen years and found that much research has examined the role of the characteristics of WCF on one or two aspects of learners' engagement. Despite this, Goldstein (2006) argues that other contextual factors have not received sufficient attention in WCF research. Conversely, social-oriented studies on written feedback have made substantial contributions to the field by providing comprehensive and detailed descriptions of the instructional, interpersonal, interactional, curricular, programmatic,

institutional, sociopolitical, and sociocultural aspects of the context (Goldstein, 2006; Hyland & Hyland, 2006a). Moreover, some scholars have focused on examining the interaction between individual and contextual factors to gain a deeper understanding of the internal mechanisms that influence students' engagement (Ma et al., 2018). From the perspective of interaction, scholars are emphasizing the different levels of interaction that exist between individuals and others and the environment and then using students' engagement as a mediating variable to explore its impact on student's academic achievement.

In conclusion, although the factors affecting students' engagement can be approached from different perspectives, they are all essentially based on the individual, the environment, and the interaction between the two as the main dividing dimension. The wide range of learner factors and contextual factors reflects "the richness and complexity of classroom life" and learners' engagement with WCF is a part of such life (Guerrettaz & Johnston, 2013). The myriad of learner and contextual factors highlights the intricate and sophisticated nature of classroom dynamics, with learners' engagement in WCF representing an integral part of this complexity (Guerrettaz & Johnston, 2013). This complexity arises because multiple factors may synergistically facilitate learning, but they can also exert conflicting influences on one another (Evans et al., 2010). However, experimental or quasi-experimental studies that isolate a single factor as the primary source cannot capture the dynamic relationship between learner and contextual factors (Lee, 2008). On the contrary, an ecological perspective that underscores the interconnectedness between individuals and their context while rejecting an approach that isolates human activity provides a more in-depth understanding of this issue (Han, 2019).

2.3.4 Studies on the Ecological Perspective in Language Learning

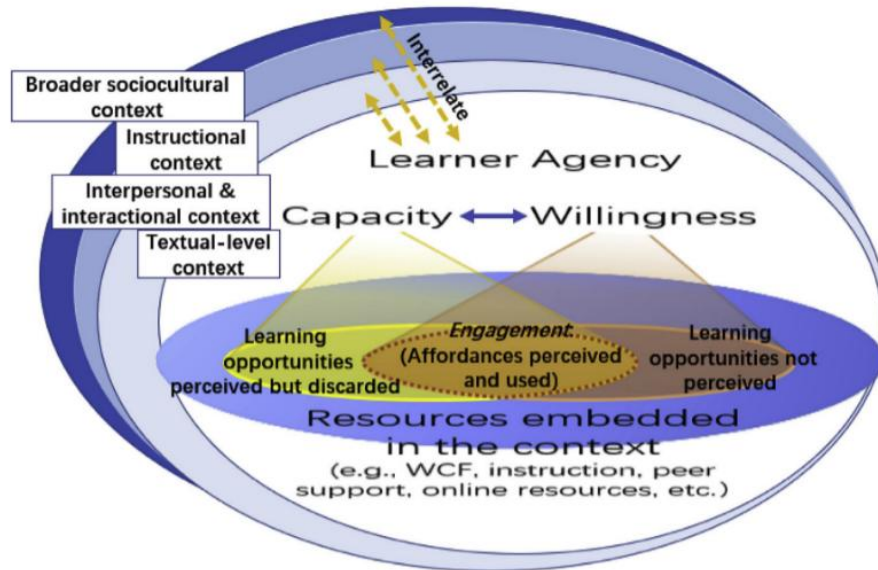
Ecology is defined as the scientific study of the interrelationships between Different creature and its natural setting (Leo, 2002), emphasizing the interconnectedness between individual behaviors and their respective contexts. Affordances are not solely a feature embedded or inherent in an environment but are born of the interactions between an organism and its environment (Leo, 2004; Thoms, 2014). When people wield agency over and establish relationships with and within the environment, affordances result (Lee et al.,

2021). While a learning opportunity may be afforded by the environment, students have to be able to perceive it and have the motivation to act upon it (Gibson, 1979; Reed, 1993). Viewed ecologically, the diverse beliefs and skills of learners, in conjunction with other contextual factors such as teacher's instructional methods and curricular objectives, can result in fluctuations in how students adopt feedback in real classroom writing.

From the ecological perspective, the different beliefs and proficiency of learners, as well as the mediating role of other contextual factors such as teacher's teaching practices and course objectives, can lead to variations in students' use of feedback in the writing classroom. In particular, the engagement of learners with written corrective feedback can be viewed as a dynamic process in which students recognize and take advantage of language learning opportunities provided by such feedback (Bitchener & Storch, 2016). It is crucial that teachers create an alignment between students' will, capacity, and the context for students to perceive and seize learning opportunities or affordances. However, it is worth noting that feedback may be ignored if it provides opportunities beyond the individual learner's level of development.

In actual classroom instruction, students' abilities, motivation, and surrounding environments may differ from one student to another (Han, 2019). The ecological perspective views context as a multi-layered structure, consisting of nested ecosystems that encompass various sub-systems, spanning from the micro-level settings to the broader social and cultural environment (Bronfenbrenner, 1979, 1993; Peng, 2012, 2014; Leo, 2003, 2004). This implies that students in the same classroom may still receive diverse instructions, participate in distinct activities, and access different learning resources beyond the classroom environment (Leo, 2003). As individual learners obtain resources differently, it is unsurprising that specific learning opportunities available to each learner also differ in situations related to WCF (Han, 2019). Since both learner agency and available resources stemming from the context differ, what may be considered a "match" for one student could potentially be a "mismatch" for another. This interplay between learner and contextual factors helps clarify why there are individual differences in students' engagement with feedback.

Figure 2-8 Learners' engagement with WCF from an Ecological Perspective (Han, 2019)



As Figure 2-8 shows, students are in contexts where there is an abundance of resources that can facilitate learning. However, facilitating students' engagement with the teacher's WCF depends on students' capacity and willingness to use learner agency. Three results may arise under such conditions. First, the learner perceives the learning opportunity but fails to use it to facilitate learning; Second, the learner perceives the learning opportunity and can use it to facilitate learning; third, the learner does not perceive the learning opportunity. Only the second result promotes student participation in the teacher's WCF.

Bitchenor and Storch (2016) briefly introduced the notion of affordance and used it to discuss individual variations in students' engagement with WCF, but until now few studies have applied this ecological perspective to analyze students' engagement with WCF. To bridge the research gap, this paper explores three high school students' engagement with teacher's WCF from an ecological perspective in EFL classrooms. Thus, we can investigate the students in Nanchong from an ecological perspective as an individual in a real classroom environment, who is able to use the resources of the environment to facilitate engagement with corrective feedback through his or her own capacity and willingness (learner agency).

Chapter Three Research Methodology

In the previous chapter, we reviewed the related theories and studies of WCF. In this chapter, a comprehensive overview of the study design for the current research project will be provided. This research will discuss key factors such as the research question, research context, participants, research methods and instruments, data collection procedures, and analysis techniques that will be utilized in the study. By examining these elements in detail, readers will gain a better understanding of the overall methodology and approach that will be used to investigate the main research question.

3.1 Research Questions

This study aims to investigate which learner factors and contextual factors influence students' engagement with written corrective feedback, and in what way these two factors together influence students' engagement with written corrective feedback through an ecological perspective. Therefore, based on Vygotsky's Sociocultural Theory, output hypothesis, and interaction hypothesis as well as some earlier studies on WCF, the specific research questions are displayed below to achieve the objectives of the research:

- (1) What learner factors will influence students' engagement with teacher's WCF?
- (2) What contextual factors will influence students' engagement with teacher's WCF?
- (3) How do these two types of factors together influence students' engagement with teacher's WCF?

3.2 Research Methods

Research into students' engagement with teacher's WCF (written corrective feedback) has predominantly been carried out through experimental studies, which have limitations in terms of describing the interaction processes occurring between teachers and students. Additionally, there is a scarcity of research that delves in-depth into the

complex interplay between students' affective, cognitive, and behavioral factors during their interaction with WCF. However, the exploration of processes often needs to be based on the description of basic characteristics. As a result, this study employed a mixed-methods research approach, combining both quantitative and qualitative data collection methods. The aim is to capture an accurate depiction of teacher feedback and student engagement in natural contexts through the use of quantitative data. Additionally, the study will delve deeper into the underlying learner and contextual factors that impact students' engagement with WCF, exploring how these two sets of factors interact to influence learners' engagement with WCF. Through this comprehensive approach, we hope to gain a more complete understanding of the complex dynamics that occur between teachers and students during the WCF process.

More insightful findings could be gained from a mixture of perspectives. To probe into the interrelation of students' engagement with teacher's WCF, quantitative data were collected from student first and revised drafts, qualitative data from students' drafts with written corrective feedback, semi-structured interviews, and retrospective verbal reports. While statistical data provide an overview of teacher's WCF practices and students' engagement, the use of qualitative data collection methods will allow for a more in-depth exploration of how various learner and contextual factors impact students' engagement with teacher's WCF.

As Creswell (2012) notes, this approach is widely recognized as an effective way to maximize the strengths of different data collection methods and minimize their limitations (Creswell, 2012).

3.3 Research Context and Participants

This section provides a detailed description of the context in which the study was conducted, as well as information about the research participants.

3.3.1 Research Context

The study was conducted in a provincial demonstration high school situated in the northeastern region of Sichuan. Upon enrollment, students were grouped into either

experimental or regular classes based on their scores achieved in the high school entrance examination. In this study, the class was selected as the ordinary class, in which the teacher, Yuan, focuses on cultivating students' writing. Due to curricular requirements, students were required to write a total of four argumentative essays throughout the course of the study. These essays comprised of three paragraphs and were completed at the end of each week. The titles of four writing tasks are given in Appendix IV. Before writing, the teacher would also tell them the marking criteria for NEMT's writing. Moreover, the students' writing was done in the classroom and was submitted to Yuan immediately after class. In the writing class, students followed the feedback-revision cycle, including writing drafts, peer feedback, receiving written corrective feedback from teachers, and then completing the revised drafts.

3.3.2 The Teacher and Writing Assignments

The instructor, who goes by the pseudonym Yuan, has over 15 years of experience teaching English at the high school level in China. Although Yuan holds a Bachelor's degree in English Linguistics, they are a non-native speaker of English. Since the study had no instructions on feedback, Yuan provided WCF as she preferred. The writing tasks that students practice at the high school level are decided by the teacher at the end of a unit, and students' essays are peer-reviewed in class before being submitted to the teacher for marking, and after the peer-assessment students submit their revised drafts to the teacher for revision. Therefore, students usually have only one draft.

As Yuan had never been exposed to any form of training on WCF before, the researcher gave her a brief training on what written corrective feedback is and its types. When providing feedback, the most common form of feedback used by Yuan was indirect WCF with metalinguistic explanations, followed by direct WCF and indirect WCF. Moreover, to deepen the students' memory of a certain mistake, Yuan would go through the grammar point with a high error rate in the next lesson.

3.3.3 Students

Three students, Li, Qiu, and Zeng, were selected to participate in the study. They were chosen because their English language proficiency and writing abilities were representative of the majority of the class. Their performance levels were determined based on a diagnostic writing assessment conducted at the beginning of a new term, observations of their in-class performance and participation, and recommendations from Yuan. Additionally, they did not attend any teacher-student writing conferences outside of the classroom, which is typical for most students in the class and can have a significant impact on engagement (Han & Hyland, 2015). Among the selected students, Li demonstrated high proficiency, Qiu was considered an average student, and Zeng was an under-achieving student. Gender was not taken into account in the selection of students. The background information of the three students is displayed in Table 3.1.

Table 3.1 Background Information of Student Participants

Name	Performance level	Gender	Year of high school
Li	High proficiency	Female	Second year
Qiu	Average	Female	Second year
Zeng	low proficiency	Male	Second year

3.4 Research Instruments

This section provides a comprehensive overview of the three research instruments used in the experiment, including their sources and how they were implemented.

3.4.1 Retrospective Verbal Reports

Eduard J. Fidler (1983) suggests that retrospective verbal reports are a dependable and valid source of data, and do not alter the thought process. Ericsson and Simon (1993) further explain that immediately after a task is completed, there are retrieval cues in short-term memory that enable effective recall of the sequence of thoughts. In this study retrospective oral reports are given immediately after each student has completed each

essay revision. In total, four reports were given. Students were given clear instructions prior to each report (see Appendix I adopted from Ma, 2012). During the reports, students' drafts and teacher feedback, along with their revisions, were utilized as prompts (Han, 2019). The researcher asked about each piece of feedback and identified error, prompting the student to recall and verbalize their thoughts as they read through the feedback and addressed the specific error. Additionally, urgent follow-up questions were posed by the researcher based on the student's responses.

3.4.2 Semi-structured Interview

Along with retrospective verbal reports, interviews were a primary research tool utilized in this study. Colhen and Manion (1994) categorized interviews as structured, unstructured, and semi-structured. Semi-structured interviews were employed in this study as they allowed for a more comprehensive and detailed understanding of the research topic (Yang, 2013). Both teachers and students were interviewed to gather data. The researcher aimed to maintain authenticity during the interview process and minimize their own intervention.

Each research participant was interviewed twice during the course of the semester - once at the beginning and once at the end - using a pre-determined interview outline as a guide (adopted from Han, 2019), which can be found in appendix III. The language used in the interviews was chosen by the research participants, and both teachers and students opted to use Chinese Mandarin. The semi-structured interviews were semi-open-ended and were adapted during the interview as needed to accommodate the interviewee's preferences.

3.4.3 Text Analysis

The first thing that needs to be clarified to understand text analysis is the concept of a text. A text is a flat, substantial, and linguistic experience, while text analysis usually refers to a method and strategy of data analysis, which means interpreting, analyzing and reflecting on the data related to the object of study (Lu, 2011). The goal of text analysis is to extract relevant information from the text and draw insights from it. This can involve

identifying patterns of language use, examining the themes and topics discussed in the text, or analyzing the sentiment expressed by the author. The research question is typically established at the beginning of a study, but it may undergo changes throughout the research process. As the analysis process progresses, the research question may change, for example by highlighting new elements, by being more precise, or by changing as a result of unexpected findings. In this research study, text analysis was employed to examine the structure of written texts, identify primary and secondary ideas, and explore their relationships. The study analyzed student writing samples and teacher feedback, with a focus on investigating the characteristics of the teacher's written corrective feedback (WCF) and the quality of students' revisions. A total of 24 handwritten samples were collected for analysis, including 12 original drafts with accompanying teacher WCF and 12 revised drafts. These data sets were used to investigate patterns in the feedback provided by teachers and the ways in which students responded to this feedback through their revisions.

Table 3-2 Summary of Errors in Li's Texts

Essay number	Original drafts		Revised drafts		
	Error rate	WCF received	Error Rate	Modifications in response to WCF	Self-editing
First Essay (E1)	3.05	4	0	5	2
Second Essay (E2)	3.62	5	0.72	5	1
Third Essay (E3)	3.05	5	0.61	5	0
Fourth Essay (E4)	5.10	10	0.51	10	0

Table 3-3 Summary of Errors in Qiu's Texts

Essay number	Original drafts		Revised drafts		
	Error rate	WCF received	Error Rate	Modifications in response to WCF	Self-editing
First Essay (E1)	5.04	6	0.84	5	1
Second Essay (E2)	6.36	7	0.91	7	1
Third Essay (E3)	5.11	7	0.73	7	2
Fourth Essay (E4)	6.71	10	0.67	9	0

Table 3-4 Summary of Errors in Zeng's Texts

Essay number	Original drafts		Revised drafts		
	Error rate	WCF received	Error Rate	Modifications in response to WCF	Self-editing
First Essay (E1)	5.43	5	1.09	3	0
Second Essay (E2)	5.94	6	1.98	4	0
Third Essay (E3)	7.03	9	1.56	8	0
Fourth Essay (E4)	7.04	10	2.11	7	0

In line with previous research (Zheng & Yu, 2018; Zheng & Yu, 2020), we coded errors using an adapted scheme based on Lee's (2004) analytic framework, with some modifications (see Appendix II). In the study, changes in error rates and students' textual modifications were analyzed to gain insight into their revision strategies (Zheng & Yu, 2018). As the participants were high school students, they revised their work based on the teacher's feedback, may resulting in zero error rate for the revised drafts. To evaluate the success of student revisions, an errors-per-100-words metric was used (Chandler, 2003), while the teacher's WCF was calculated based on occurrence frequency. The findings are presented in Tables 3-2, 3-3, and 3-4, which demonstrate a significant decrease in error rates across four essays for all three participants between original and revised drafts.

While it's important to analyze the error rates of the three students in their drafts, it's worth noting that these results should be considered as background information. The primary aim of this analysis is to gain a better understanding of each student's engagement, particularly in relation to their behavioral and cognitive development. By looking at error rates alongside other factors, we can develop a more nuanced and comprehensive picture of each student's progress, strengths, and areas for improvement. The success of revisions was not seen as a direct sign of students' engagement according to the conceptual framework of students' engagement with teacher's WCF.

Table 3-5 Results of Descriptive Statistics in Original Drafts

N	Mean	Std. Deviation	Minimum	Maximum	25th	Percentiles 50th(Median)	75th	
Li	4	3.705	.968	3.05	5.10	3.050	3.335	4.730
Qiu	4	5.805	.855	5.04	6.71	5.058	5.735	6.223
Zeng	4	6.360	.807	5.43	7.04	5.558	6.485	7.038

Table 3-6 Results of Descriptive Statistics in Revised Drafts

N	Mean	Std. Deviation	Minimum	Maximum	25th	Percentiles 50th(Median)	75th	
Li	4	.460	.318	.00	.72	.128	.560	.693
Qiu	4	.788	.108	.67	.91	.685	.785	.893
Zeng	4	1.686	.461	1.09	2.11	1.208	1.770	2.078

Moreover, we did nonparametric tests-Friedman test to examine whether there is a significant difference among three student's error rates within the four essays. If we look at the mean of Table 3-5 and Table 3-6, we could also see that there is a significant decline on error rates which indicates that teacher's WCF led to an improvement in all students' writing.

Table 3-7 Results of Friedman Test in Original Drafts on Error Mean

Test Statistics	
Chi-Square	6.500
df	2
Asymp.Sig	.039

Table 3-8 Results of Friedman Test in Revised Drafts on Error Mean

Test Statistics	
Chi-Square	8.000
df	2
Asymp.Sig	.018

Table 3-7 showed that there was a statistically significant difference ($p=0.039<0.05$) in the error rates among the three students' original drafts. This accurately proved Li, Qiu and Zeng were students from different language proficiency level. According to Table 3-8, there was a significant difference ($p=0.018<0.05$) in the error rates of the three students'

revised drafts. This indicates that there is a clear distinction in how engaged each student was with their teacher's WCF due to their language proficiency level. It is predicted that the perfunctory engagement would occur with Zeng, and teacher's WCF may be influenced by a variety of factors. All these would be found to be the case in the retrospective verbal report.

3.5 Data Collection and Analysis

The study utilized a case-study approach to gain insight into the students' understanding of living within their context. This approach is crucial for research that adopts an ecological perspective, as highlighted by Leo (2003). We collected data from multiple sources to allow data triangulation, including retrospective verbal reports, semi-structured interviews, students' first and revised drafts, and teacher on-script WCF. The researchers did not intervene in the class instruction. Table 1 presents the data collection timeline.

Before the commencement of the new term in week 1, every student was required to take a diagnostic test to evaluate their current level. The results of the diagnostic test in the writing part and teacher's recommendation were used for the selection of suitable research participants. During the second week of the term, the initial round of interviews was conducted with both students and teachers to gain insights into their backgrounds and experiences. We kept all interviews recordings. According to Zheng and Yu (2018), the insights gained from the interviews helped to corroborate the findings from retrospective verbal reports and elicited additional responses from the students (Zheng & Yu, 2018).

From week 3 to week 10, (3-4, 5-6, 7-8, 9-10) four different writing assignments were given to participants. To enhance their writing skills, students were tasked with submitting an essay every other week. And they were required to complete an essay in two continuous lessons on a fortnightly Thursday (starting in week 3). In the first lesson, the teacher would instruct writing and tell them which sentence patterns or words they might use in their composition. In the second lesson, students would complete their essays and exchange them with their classmates for peer assessment before revising their

essays and submitting them to the teacher. In the third week of the term, students completed their initial essay (E1) and submitted it to Yuan for feedback. Feedback was typically returned to the students on the Monday of the following week (week 4), and a copy was also provided to the researcher. As soon as students received and revised their E1, retrospective verbal reports were collected and audio-recorded to capture their cognitive and affective responses towards the WCF. Throughout the eight weeks of the study, a total of 24 essays were collected from the four participants, along with 12 verbatim transcriptions of retrospective verbal reports provided by the students.

Towards the end of the term, during weeks 11-12, final interviews were conducted with both students and teachers, lasting about 15 minutes each, and were recorded for future analysis.

Table 3-5 Timeline of data collection

Timeline	Data collection procedures
Week 1	Diagnostic test
Week 2	The first interview
Week 3-4	The first essay (E1) was completed in class; E1 returned with teacher feedback; The first retrospective verbal report; E1 was revised after class and collected.
Week 5-6	The second essay (E2) was completed in class; E2 returned with teacher feedback; The second retrospective verbal report; E2 was revised after class and collected.
Week 7-8	The third essay (E3) was completed in class; E3 returned with teacher feedback; The third retrospective verbal report; E3 revised after class and collected.
Week 9-10	The fourth essay (E4) was completed in class; E4 returned with teacher feedback; The fourth retrospective verbal report
Week 11-12	E4 was revised after class and collected. The final interview

As the study utilized a mixed quantitative and qualitative research methodology, data was gathered from various sources. The data analysis is outlined below:

The analysis of data entailed scrutinizing written compositions of students to examine the nature of teacher’s written corrective feedback (WCF) and the effectiveness of students’ revisions. Additionally, content analysis was employed to scrutinize data obtained from interviews, verbal reports, and students’ initial and revised drafts (Patton, 2002). To evaluate linguistic accuracy, each intervention made to correct errors in student writing was identified as a WCF (written corrective feedback) point according to Hyland

(2003). These points were then classified into four categories: direct WCF, indirect WCF, coded WCF, and indirect WCF with metalinguistic explanation. Following the methodology of previous studies such as Han (2019), each WCF point was then linked to the revisions made by the students in their final draft. The revisions were classified into five categories: incorrect revisions (where the error was not corrected or was corrected incorrectly), correct revisions (where the error was corrected accurately), no revisions, deletions (where the error was removed without correction), and substitutions (where the error was replaced with a corrected version). Overall, this approach allowed for a detailed analysis of the impact of different types of WCF on student revisions and provided insight into the most effective strategies for improving linguistic accuracy in writing.

The researchers transcribed all interviews and verbal reports precisely as spoken, and then verified the transcripts for accuracy with the participating students. Drafts with teacher written feedback, transcripts, diagnostic test score, and retrospective verbal reports, semi-structured interviews, students' first and revised drafts related to each student were assembled into individual case files. In the first cycle of coding the researcher read case profiles repeatedly and labeled data chunks that informed learners' engagement with WCF. Initial coding was merged and modified to build on the data and informed by the analytic framework of learners' cognitive, behavioral, and affective engagement with WCF (Han & Hyland, 2015; Zheng & Yu, 2018). This coding round also included descriptive annotation of learner factors and contextual factors that influenced WCF engagement.

In the second round of coding, researchers compared cases to identify patterns in how contextual and learner factors influenced students' engagement in WCF. Two themes emerged from this analysis: the extent to which learner and contextual factors were aligned or misaligned. Each theme was divided into two terms: willingness-(in) appropriate or capacity-(in) appropriate (see Table 3-1). The second round of coding helped to confirm initial findings and aided in the development of case narratives.

To ensure the credibility of our data analysis, we utilized several techniques, including triangulation. This involved corroborating evidence from various sources to support each theme identified (Creswell, 2002). We sought feedback from participants on the preliminary results. In addition, the researcher's long-term involvement in the field

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/585024343041011122>