



**INFLUENCING FACTORS, STUDENT PERCEPTIONS, EFFECTIVENESS
OF PEER AND TEACHER FEEDBACK ON CHINESE EFL HIGH SCHOOL
STUDENTS' ENGLISH WRITING**

By

ZHANG BO

**Thesis Submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfilment of the Requirements for the
Degree of Doctor of Philosophy**

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DEDICATION

To my parents, Zhang Guangyun and Zong Xiaoling

To all the participants who joined this study



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Doctor of Philosophy

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February 2025

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In English writing instruction, effective feedback enhances learners' writing skills and attitudes. Feedback is usually given either through teacher feedback or peer feedback, and now even through machine (computer-based) feedback. However, in most ESL/EFL settings, such as in China, teachers usually practice giving teacher feedback on their students' writing, and not so much on promoting students to give and receive feedback from their peers. Chinese high school writing instruction predominantly relies on teacher feedback, in which it has been found that it limits students' opportunities for revision and peer discussion. Grounded in Engeström's (1987) Activity Theory and Slavin's (1980) Cooperative Learning Theory, this study explores the impact of peer feedback, with teacher guidance, on Chinese EFL high school students' English writing performance across five dimensions: idea/content, organization, vocabulary, grammar, and cohesion/coherence. A quasi-experimental design was employed with 150 sophomore students from a Chinese public high school. Participants were divided into three groups: the

control group (CG, n=50) receiving only teacher feedback, experimental group 1 (EG1, n=50) receiving only peer feedback, and experimental group 2 (EG2, n=50) receiving both teacher and peer feedback. The study lasted two months, involving eight writing tasks. Data were collected through pre- and post-tests, EFL writing rubrics, and survey questionnaires. Descriptive statistics, t-tests, ANOVA and ANCOVA were used for analysis. Results showed that both EG1 and EG2 significantly outperformed CG in overall writing performance (EG1: $M = 78.42$, $SD = 4.61$; EG2: $M = 82.15$, $SD = 4.32$; CG: $M = 75.96$, $SD = 4.87$; $p < 0.05$). EG2 demonstrated the greatest improvement across all writing components, particularly in cohesion/coherence ($p = 0.01$) and vocabulary ($p = 0.021$), while EG1 showed significant gains in vocabulary ($p = 0.031$) and cohesion/coherence ($p = 0.017$). The control group exhibited minimal improvement across all aspects. Survey results revealed that students in both EG1 and EG2 had a positive perception of peer feedback, with EG2 showing the highest satisfaction ($M = 4.27$, $SD = 0.62$ on a 5-point Likert scale). Key factors influencing peer feedback effectiveness included accountability, communicativeness, utility, self-efficacy, and receptivity. This study empirically supports the integration of peer feedback in high school EFL writing instruction. Findings suggest that peer feedback, when combined with teacher guidance, yields the most substantial improvements. Educators are encouraged to implement structured peer feedback strategies with guidance from the teacher to maximize learning outcomes. Future research should explore long-term effects and variations in student perceptions when engaging with different peer reviewers.

Keywords: peer feedback, teacher feedback, high school students, English writing performance

SDG: GOAL 4 Quality Education



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**FAKTOR-FAKTOR YANG MEMPENGARUHI, PERSEPSI PELAJAR,
KEBERKESANAN MAKLUM BALAS RAKAN SEBAYA DAN GURU
TERHADAP PENULISAN BAHASA INGGERIS PELAJAR SEKOLAH
MENENGAH EFL DI CHINA**

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Dalam pengajaran penulisan bahasa Inggeris, maklum balas yang berkesan dapat meningkatkan kemahiran menulis dan sikap pelajar. Maklum balas biasanya diberikan sama ada melalui maklum balas daripada guru atau maklum balas daripada rakan sebaya, malahan juga melalui maklum balas mesin (berasaskan komputer). Walau bagaimanapun, dalam kebanyakan konteks ESL/EFL, seperti di China, guru biasanya memberi maklum balas tentang penulisan pelajar mereka, dan tidak ramai guru menggalakkan pelajar memberi dan menerima maklum balas daripada rakan sebaya mereka. Walau bagaimanapun, pengajaran penulisan di sekolah menengah China kebanyakannya bergantung kepada maklum balas guru, dimana ini menghadkan peluang pelajar untuk menyemak semula dan berbincang dengan rakan sebaya mereka. Berasaskan Teori Aktiviti Engeström (1987) dan Teori Pembelajaran Koperatif Slavin (1980), kajian ini mengkaji kesan maklum balas rakan sebaya, dengan bimbingan guru, terhadap prestasi

penulisan Bahasa Inggeris pelajar sekolah menengah China dalam lima aspek: idea/kandungan, organisasi, perbendaharaan kata, tatabahasa, dan kesepadanan/keselarasan. Kajian ini menggunakan reka bentuk kuasi-eksperimen yang melibatkan 150 pelajar tahun kedua dari sebuah sekolah menengah awam di China. Peserta dibahagikan kepada tiga kumpulan: kumpulan kawalan (CG, $n=50$) yang hanya menerima maklum balas guru, kumpulan eksperimen 1 (EG1, $n=50$) yang hanya menerima maklum balas rakan sebaya, dan kumpulan eksperimen 2 (EG2, $n=50$) yang menerima kedua-dua maklum balas guru dan rakan sebaya. Kajian ini dijalankan selama dua bulan melalui lapan tugas penulisan. Data dikumpulkan melalui ujian awal dan akhir, rubrik penilaian penulisan EFL, serta soal selidik. Analisis data dilakukan menggunakan statistik deskriptif, ujian t, ANOVA dan ANCOVA. Keputusan menunjukkan bahawa kedua-dua kumpulan EG1 dan EG2 mencapai prestasi penulisan yang lebih baik berbanding CG secara signifikan (EG1: $M = 78.42$, $SD = 4.61$; EG2: $M = 82.15$, $SD = 4.32$; CG: $M = 75.96$, $SD = 4.87$; $p < 0.05$). EG2 menunjukkan peningkatan paling ketara dalam semua aspek penulisan, terutamanya dalam kesepadanan/keselarasan ($p = 0.01$) dan perbendaharaan kata ($p = 0.021$), manakala EG1 menunjukkan peningkatan ketara dalam perbendaharaan kata ($p = 0.031$) dan kesepadanan/keselarasan ($p = 0.017$). Kumpulan kawalan hanya menunjukkan peningkatan yang minimum dalam semua aspek. Manakala hasil soal selidik menunjukkan bahawa pelajar dalam kedua-dua kumpulan EG1 dan EG2 mempunyai persepsi positif terhadap maklum balas rakan sebaya, dengan EG2 menunjukkan tahap kepuasan tertinggi ($M = 4.27$, $SD = 0.62$ pada skala Likert 5 mata). Faktor

utama yang mempengaruhi keberkesanan maklum balas rakan sebaya termasuk akauntabiliti, komunikasi, kegunaan, efikasi sendiri, dan penerimaan. Kajian ini menyokong secara empirikal integrasi maklum balas rakan sebaya dalam pengajaran penulisan bahasa Inggeris di sekolah menengah. Penemuan mencadangkan bahawa maklum balas rakan sebaya, apabila digabungkan dengan bimbingan guru, menghasilkan peningkatan yang paling ketara. Oleh itu, pendidik digalakkan untuk melaksanakan strategi maklum balas rakan sebaya yang berstruktur dengan bimbingan guru bagi memaksimumkan hasil pembelajaran. Kajian masa depan disarankan untuk meneroka kesan jangka panjang dan variasi dalam persepsi pelajar apabila berinteraksi dengan rakan penilai yang berbeza.

Kata Kunci: Maklum balas rakan sebaya; Maklum balas guru; Pelajar sekolah menengah; Prestasi penulisan bahasa Inggeris

SDG: MATLAMAT 4: Pendidikan Berkualiti

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LIST OF ABBREVIATIONS

ESL	English as a second language
EFL	English as a foreign language
CG	Control Group
EG1	Experimental Group 1
EG2	Experimental Group 2
ANOVA	Analysis of variance
ANCOVA	Analysis of Covariance
EDA	Exploratory Data Analysis



CHAPTER 1

INTRODUCTION

1.1 Introduction

Writing, as a basic skill in language use, is extremely important in English language learning. The Chinese New English Curriculum Standards (2017 Edition) notes that English language skills are an important part of language use. However, English writing is still a difficult task for Chinese high school students (Yi, 2017). Not only do Chinese students' English writing standards need to be improved, but teaching writing has also been a problem for English teachers in China (Su et al., 2013).

With the popularity of the process writing approach, writing feedback is valued by scholars and teachers alike. The majority of academics concur that writing feedback is crucial for helping students write better (Liu, 2015). In the 1970s, the process approach started to be introduced into English writing class instead of the traditional finished product approach. The process writing approach places more emphasis on the improvement of students' writing and thinking skills, which makes up for the problem that the finished writing method neglects the writing process and communication. Feedback is an intermediate step in process writing, it can be used to evaluate students' writing process, and it can also be used to improve teaching practice by analyzing the teaching effect (Yao & Wan, 2012). The effectiveness of feedback enhances writing ability and educational impact (Ji, 2018). With the increasing popularity of peer feedback, many researchers tend to focus on

students and allow more students to participate in the evaluation writing process. In the process of peer evaluation, students can get feedback from their peers at the first time, guide the problems in writing and adjust their writing ideas in time, and gradually improve the ability of language output. Peer review is grounded in cooperative learning theory, the process approach to writing, and the theory of the nearest zone of proximal growth, and is designed to promote student motivation and to develop students' writing autonomy and critical thinking skills through the exchange of feedback on peer essays (Wang, 2021).

Scholars from China as well as abroad have proven in recent years that peer feedback is helpful for improving English writing, making it a crucial type of feedback (Liu, 2015). However, in Chinese and international studies, the research subjects of this method are mostly college students, while fewer high school students are the subjects of the study (Wang, 2022). In Chinese high school English teaching, teacher feedback still dominates, and students generally believe that the teacher is the authority and that their classmates' English proficiency are too limited to provide effective feedback, so peer feedback is not widely used (Zhang, 2022). In addition, due to the limitation of class size and grading tasks, English writing teachers in senior high schools in China pay more attention to the accuracy of students' language than to the organization and coherence of the texts. Peer feedback can therefore be used in senior high school English writing classes to help students not just with their language skills but also with the structure and coherence of their writing. To fill this gap, this study aimed to explore the effectiveness of peer

feedback in teaching English writing in Chinese high schools.

1.2 Background of the Study

Teacher feedback is the most widely used type of feedback in the teaching of English writing in China, in which the effectiveness of teachers' feedback is reflected in the specific suggestions or encouraging words provided by teachers for students to improve their writing (Ma,2018; Zhang,2022; Wang,2023). Teacher feedback can significantly enhance students' awareness of text layout in writing. In terms of emotional attitudes, students are more willing to accept teacher feedback than other feedback methods (Zhou, 2013; Zou,2017). Students think teacher feedback is authoritative and more effective, so they attach more importance to teacher feedback, and this phenomenon is especially obvious in foreign language teaching (Wang, 2023). However, that doesn't mean teacher feedback is not limited. First, individual teacher feedback is time-consuming. Second, teacher feedback is mostly result-oriented. And third, teacher feedback is mainly teacher-oriented. When students' participation in writing feedback is relatively low, and students' awareness of autonomous learning is lacking, the ability of self-regulated learning cannot be improved (Han,2017; Sun, 2022; Zou,2024). Therefore, the current teacher feedback cannot fully meet the needs of students for the improvement of writing ability, and other feedback methods are needed to make up for it. In recent years, the gradual increase of peer feedback research has made researchers gradually pay attention to its advantages and began to further study and use it (Zhao, 2018; Zou,2024).

In recent decades, peer feedback has been used as an important pedagogical activity in a variety of areas, such as native or second language writing, oral presentation of projects, physics modeling, etc (Baker, 2016; Tsivitanidou et al., 2017). In the field of second language teaching, especially in EFL writing, more and more teachers and researchers are focusing on peer feedback. Many studies have found that peer feedback, when given effectively, can not only reduce the pressure on teachers to review all students' scripts alone (Rahimi, 2013; Tsui & Ng, 2010), it can also benefit EFL learners by improving their understanding of quality standards, improving their ability to evaluate and think critically about second language writing, enhancing their autonomy by reading peers' texts, and even helping students form English learning communities (Ghahari & Sedaghat, 2018; Schunn et al., 2016).

However, peer feedback activities are favored by many writing teachers and even though this teaching approach is now widely used mainly in writing teaching abroad, its application rate in China is still relatively low. This is because in China, on the one hand, many teachers lack knowledge of peer feedback implementation processes and learner training methods (Zhao, 2018; Zou, 2024). On the other hand, Chinese EFL learners lack confidence in their own writing feedback ability due to their long-term reliance on written feedback from teachers (Han, 2017; Zhao, 2010), they also do not trust the feedback ability of their peers, which results in low acceptance of peer feedback (Hu, 2012; Zhao, 2018; Sun, 2022).

The teaching practice of using peer feedback in teaching English writing in high school is affected by the limitations of students' English proficiency (Cao, 2019). The teaching model of using peer feedback in teaching English writing in high school is vulnerable to the English proficiency of the students in the class (Zou et al., 2017). The low level of students' English writing skills often leads to a decrease in teachers' ability to use peer feedback (Han, 2017). The lower English proficient students have difficulty in finding mistakes or problems in each other's writing in the peer feedback mode (Zhao, 2018). The teacher's use of peer feedback often makes it difficult for students with lower English proficiency to identify errors or problems in each other's writing (Zhang, 2020). Because of the mismatch between reading and writing skills in English, even if students develop each other's writing through reading, it is difficult to find out what the problems are (Rahimi, 2013; Wang, 2021). This affects the effectiveness of peer feedback in practice. Since it is difficult for peers to provide as much feedback as they do in high school English writing, it is difficult for peers to use their professional knowledge to evaluate as teachers do, so the limitations of students' English proficiency in the classroom directly affect the effectiveness of peer feedback (Deiglmayr, 2017).

There is also the issue where the teaching practices using peer feedback in teaching English writing in high school are affected by a lack of trust among students (Wang, 2021). Since the use of peer feedback in high school English writing instruction is limited by students' English proficiency, resulting in actual peer feedback does not work well, and its long-term use often leads students

to question their partners' English writing skills (Sun, 2016). For example, in the long-term use of peer feedback, students are not able to make useful and constructive corrections among themselves, which often leads to further trust among students (Bai, 2013). This often leads to a further lack of trust among students. Therefore, in high school English writing, it is difficult to use professional knowledge to evaluate as teachers do, so the lack of trust among students directly affects the effectiveness of peer feedback (Zou et al., 2017).

The teaching practice of using peer feedback in teaching English writing in high school is affected by the actual situation of students where high school students tend to focus on the form of peer feedback and ignore the actual content, resulting in teachers' failure to achieve good results in the actual peer feedback (Tsivitanidou et al., 2017). In the traditional English reading ability development, high school English students are often influenced by their previous thinking and focus on English vocabulary and grammar (Sasaki, 2011). Similarly, high school English teachers tend to teach writing in an overly simple way, and some teachers do not teach English writing as a separate subject from English knowledge (Wang, 2019). Some teachers do not teach English writing as a separate subject from English knowledge teaching, and thus the development of students' writing ability is weak (Liu et al., 2017). In the same way, in the teaching of English writing, the teaching of English writing skills is neglected, and thus students are not active in English writing (Sun, 2016). Because of the high school English teachers have a single mode of teaching writing to students, the students' motivation to learn

English is affected by the lack of English writing skills and the inability to acquire high-value skills in the classroom (Yi, 2017).

The focus of current research on peer feedback activities in EFL writing is feedback training (Min, 2016; Rahimi, 2013), the influencing factors of writing performance (Tsui & Ng, 2000), organizational strategies of the feedback process (Allen & Mills, 2015; Wu et al., 2015) and the performance of peer feedback (Zhu & Mitchell, 2012), while few studies have examined in depth the perception of peer feedback activities from the perspective of individual learner motivation (Zhang, 2018). There is no doubt that learner perception influences the achievement of learning goals and is an important factor in determining the efficiency of educational activities (Zhang, 2018). Therefore, it is helpful to explore the degree of learners' perception or participation in the feedback process to know more about the specific situation of peer feedback, it is also helpful to the analysis and explanation of the practice effect of peer feedback.

With regard to the effects of peer feedback activities, many studies have drawn conclusions from examining only a single peer feedback activity (Miao et al., 2006). Even though some studies cover multiple peer feedback activities, their time span is barely more than one semester (Zhao, 2010). In fact, the improvement of writing skills does not happen overnight; it must be done over a period of time before improvement is possible. Therefore, it is necessary to implement a follow-up study longer than one semester when examining the effectiveness of peer feedback activities. Furthermore, existing

studies have evaluated the effectiveness of peer feedback activities by analyzing the quality of the manuscript and/or the quality of revision, neglecting to explore learners' feedback skills. However, it is undeniable that, in addition to skills on the task itself, the development of learners' feedback skills is an important factor in reflecting the effectiveness of peer feedback activities (Deiglmayr, 2017; Zhang, 2022; Wang, 2023). Therefore, when judging the effectiveness of peer feedback, it is important to focus not only on whether learners' second language writing skills have improved, but also on what specific aspects of learners have improved, such as content, organization, vocabulary, grammar, and cohesion have improved and what the specific manifestations are.

Considering the gaps in the above-mentioned studies, this study explores the performance and changes in EFL learners' engagement in peer feedback activities, the effects of peer feedback practices, i.e., changes in learners' EFL writing ability and feedback skills, explore the impact of peer feedback on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence) and the influencing factors. By planning and carrying out peer feedback activities in writing instruction, the researcher intends to help teachers who want to encourage the growth of their students' EFL writing skills and properly lessen the burden of manuscript review.

1.3 Statement of Problem

The Chinese New English Curriculum Standards (2017 Edition) notes that in the process of learning English, students have to master the four basic skills of listening, speaking, reading and writing, and “writing” is one of the four basic skills that are relatively difficult to master. At the present stage, English writing is still the weakness of most students in the English learning process (Zhang, 2022). In Lin’s research (Lin, 2016), Three factors can be used to analyse why English writing lags behind other English teaching strands (such listening, speaking, and reading). First of all, English writing is typically taught in a passive manner by teachers and students in the existing system of instruction. Second, because of the norm of exam-oriented education, most high school English writing classes are disrupted, and some of them cannot be completed on time. Thirdly, students’ English is not well-founded, and they experience a sense of overwhelm when required to write in English.

Moreover, most areas of China still use the traditional large classroom system where teachers need to correct a large number of essays, and their workload is understandably heavy (Zeng & Liang, 2017). After teachers spend a lot of time reading and marking students’ essays, students get their own essays and do not pay much attention to them (Ji, 2018). Few students edit their writings in response to the teacher’s comments, and the majority of students focus more on their grades before quickly skimming the teacher’s comments. (Liu et al., 2017). Many students feel that after spending a lot of time writing essays in the process of learning English, but they feel that their English writing has not improved much and they still make similar mistakes in the

process of writing in the future (Li & Xue, 2018). Therefore, from this student's point of view, traditional teacher feedback is not fully utilized and its role is not played out (Li, 2019).

Second, teacher feedback, which has been used in English classrooms in most districts in teaching English writing, also has drawbacks (Lee, 2017). This is mainly reflected in two aspects. On the one hand, when they get students' compositions, teachers usually give some simple feedback to the students and do not review them very carefully (Yao & Wan, 2012). In China, a large part of the feedback given to students is simply a comment or a grade (Zou et al., 2017). Due to the teachers' tight working schedule and heavy workload, they usually do not give detailed feedback to the students to indicate the reasons for their poor writing or the reasons for this (Ann, 2020). The teachers usually do not indicate in their feedback to the students the reasons why the students did not write well or why this area needs to be revised (Cao, 2019). Currently, in most high school English essays, most teachers often use more negative feedback, believing that the key to reviewing essays is to point out students' mistakes, and in this way they can reduce their mistakes in English writing in the future, while the good points are usually not marked (Ho et al., 2019). In fact, when the students saw the teacher's comments, they were not able to give them any feedback. In fact, students are less motivated when they see that their teacher's essays are marked with a large number of errors in red (Ma, 2018). On the other hand, teachers' feedback mostly focuses on students' grammar and vocabulary errors, but rarely on the structure of students' essays, and this kind of

feedback makes students focus more on grammar and vocabulary than on chapter structure and content themes (Qiu & Ma, 2017). This imbalance causes students to concentrate more on mechanical accuracy rather than on developing well-structured, coherent essays.

Despite curriculum reforms that encourage collaborative learning, peer feedback remains underutilized in English writing classrooms in China (Wang, 2022). Given the challenges associated with teacher feedback, peer feedback has been recognized as a potential alternative or supplement that actively engages students in the revision process. Research suggests that peer feedback can promote students' writing awareness, critical thinking, and self-regulation in learning (Hyland & Hyland, 2019). However, despite the extensive research on peer feedback in second language writing, comparative studies on the effectiveness of peer feedback versus teacher feedback among Chinese EFL high school students remain insufficient (Wang, 2023). Existing studies have primarily focused on university students or general EFL learners, leaving a gap in understanding how peer feedback influences high school students' writing performance in China (Qiu & Ma, 2017). This gap is particularly significant because high school students in China face unique challenges, such as exam-oriented pressures and teacher-centered instruction, which may affect their responses to different forms of feedback. The need for more comparative studies arises from the fact that although peer feedback has shown promise in some contexts, its effectiveness relative to teacher feedback in improving writing performance among Chinese high school students remains largely unexplored. Addressing

this gap is crucial for understanding whether peer feedback can serve as an effective complement or even an alternative to traditional teacher feedback in Chinese EFL classrooms (Zhao, 2018; Zou, 2024). The novelty of this study lies in its focus on high school students in the Chinese EFL context—a group that has not been extensively studied in previous research. Understanding whether peer feedback can improve writing skills in this context is crucial, given the distinct pressures and instructional models high school students face (Wang, 2022).

Therefore, the purpose of this study is to explore whether peer feedback can enhance Chinese students' English writing, specifically in terms of ideas, organization, vocabulary, grammar, and cohesion, and to identify the factors that contribute to any improvements in their writing. By investigating peer feedback in the context of high school English education, this study aims to contribute to the existing body of literature on the effectiveness of different feedback methods and provide insights into more effective feedback strategies for enhancing students' writing skills in exam-oriented educational environments.

1.4 Objectives of the Study

The purpose of the study is to determine the effectiveness of peer feedback and its application on writing skills on Chinese EFL high school students.

The specific objectives of the study are to:

- 1) To determine the impact of peer feedback on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence)
- 2) To investigate the factors contributing to the effectiveness of peer feedback impact on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence).
- 3) To explore Chinese EFL high school students' perceptions of peer feedback on their English writing.

1.5 Research Questions

- 1) What are the impacts of peer feedback on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence)?
- 2) What are the factors related to peer feedback that influence Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence)?
- 3) What are Chinese EFL high school students' perceptions of peer feedback on their English writing?

1.6 Research Hypotheses

This study is quantitative research and will adopt the quasi-experimental method. For this study, the following hypotheses were made.

Null Hypothesis (H0):

H0: There is no significant difference in writing performance (idea/content, organization, vocabulary, grammar, and cohesion/coherence) between Chinese EFL high school students who receive peer feedback and those who do not receive peer feedback.

Alternative Hypothesis (H1):

H1: Chinese EFL high school students who receive peer feedback will show significant improvement in writing performance (idea/content, organization, vocabulary, grammar, and cohesion/coherence) compared to those who do not receive peer feedback.

Specific Hypotheses for Each Component of Writing Performance

Hypothesis for Idea/Content:

H2: Students who receive peer feedback will demonstrate significantly better performance in the quality of ideas and content in their writing compared to those who do not receive peer feedback.

Hypothesis for Organization:

H3: Students who receive peer feedback will show significant improvement in the organization of their writing compared to those who do not receive peer feedback.

Hypothesis for Vocabulary:

H4: Students who receive peer feedback will exhibit significant enhancement in vocabulary usage in their writing compared to those who do not receive

peer feedback.

Hypothesis for Grammar:

H5: Students who receive peer feedback will achieve significantly better grammar accuracy in their writing compared to those who do not receive peer feedback.

Hypothesis for Cohesion/Coherence:

H6: Students who receive peer feedback will demonstrate significantly improved cohesion and coherence in their writing compared to those who do not receive peer feedback.

1.7 Significance of the Study

With the increasing globalization of economy, the cooperation and communication between different countries, as a bridge of communication, English makes international communication easier in a variety of contexts, including international trade, corporate negotiations, and significant international conferences. Besides speaking, writing in English is also a typical and significant form of communication, a language ability that English language learners must master, and an essential component of English instruction. This study focuses on learners' peer feedback performance and perception in EFL writing, and provides references for effective English writing instruction, especially for peer feedback activities. This study has certain theoretical and practical implications.

In a theoretical sense, the study of teacher feedback and peer feedback, which are mainly based on the process writing method, has been quite well explored in Chinese literature (Li, 2019). However, while the feedback model that combines teacher and peer feedback has been studied extensively at the college level, it has received less attention in high school contexts (Wang, 2019). The reason for the focus on colleges and universities is that college students have a relatively high level of thinking and learning autonomy, which is conducive to peer feedback (Zhang, 2022). However, the rapid development of information technology has led to high school students having greater access to resources, and their cognitive capabilities have improved as well (Chen, 2021). At the same time, more open and flexible teaching methods brought by modern teaching concepts also make them have more opportunities to practice and their cognitive ability has been greatly exercised and improved (Elfiyanto & Fukazawa, 2021). Therefore, the research on feedback methods should involve a wider range and enrich the research results of writing feedback according to the characteristics of students at different stages (Hu, 2012). The basic education stage is a critical stage for students to master English writing skills, but teaching English writing at this stage is not very smooth (Liu et al., 2017). The over-reliance on teacher feedback has caused a decline in their ability to think proactively and not to identify problems with their own writing. The importance of feedback on writing has not been taken seriously by students (Ruegg, 2015), and the revision of some problems is entirely within the students' own ability. If peers could review each other's work well enough, it would not only help them improve their English writing, but also greatly reduce the teachers' revision

work (Ghahari & Sedaghat, 2018). This study, therefore, extends the research on feedback in process writing by incorporating peer feedback into high school English writing instruction, addressing the gap in feedback research at this educational level.

In 2017, China's Ministry of Education has officially released new requirements for high school English curriculum that place an emphasis on students' ability to use English in a variety of contexts (2017, Edition). Writing is a crucial language output skill that provides a thorough reflection of learners' English language proficiency and to a large extent, reflects students' overall proficiency (Qiu & Ma, 2017). As a result, English writing has become a popular area of study for professionals and academics. High school English writing classes typically focus more time and energy on pre-writing activities including helping students examination the subject, assisting them in coming up with ideas, and even giving students suitable writing templates (Wichanpricha, 2020). Students practice writing on a variety of topics, but the actual High school students who speak English as a foreign language still find writing a difficult task and generally believe that writing is one of the four basic skills in English (Wang, 2019). Not only do students' writing levels need to be improved, but writing teaching is also the majority of English teachers are troubled by this problem (Su et al., 2013). Therefore, to improve the effectiveness of writing teaching and to help high school students improve their writing skills is a pressing task for the development of English education in high schools in China. The English language education in high schools in China should be developed as a matter of urgency.

In terms of practice, this study can provide an empirical reference for the organization and effective implementation of English writing instruction, especially peer feedback activities. By examining how peer feedback impacts students' writing skills, this study provides teachers with valuable insights into improving the peer feedback process itself, making it a more effective tool for student development (Hyland & Hyland, 2019). It can also help teachers understand the influence of learners' peer feedback perceptions and sociocultural factors such as rules, community, and division of labor on peer feedback practices, and inspire teachers to consider means to make peer feedback activities more effective (Ann, 2020). The results of this study suggest that by creating a structured environment for peer feedback, students can gain a deeper understanding of their own writing while learning how to provide constructive feedback to others, which can enhance their overall writing performance (Ghahari & Sedaghat, 2022). It will also inspire writing teachers to consider ways to increase the efficiency of peer-feedback processes and inject new ideas into the improvement of English writing teaching methods (Dong et al., 2019). Furthermore, in terms of practical significance, combining teacher feedback with peer feedback can benefit different teaching subjects (Cao, 2019). On the one hand, this feedback mode can make teachers change the traditional view of writing feedback, play a teacher-led role, focus on the students' main position, and to a certain extent, can also reduce the teacher's correction task. By balancing teacher feedback with peer feedback, teachers can offer more personalized attention while still promoting student autonomy in the writing process (Zou, 2017). Peer feedback can give students more opportunities to participate, including

opportunities for writing practice and interactive feedback in class, so that students can closely integrate learning and use. This shift towards more collaborative learning models allows students to be more actively engaged in their writing development, increasing both their responsibility and motivation to improve (Hyland & Hyland, 2019). This process can cultivate students' positive thinking habits, further stimulate their interest in English writing, and thus improve their English written writing skills.

1.8 Scope of the Study

The subjects in this study were sophomores at a high school in Heilongjiang, China. The sample size was 150 (three classes), with equal numbers of students in each class. The inclusion criteria for this study were that students had a basic level of proficiency in English, as determined by their previous English test scores, and that they were willing to participate in peer feedback activities. Exclusion criteria included students who had already received extensive training in peer feedback or those who had a significantly higher or lower level of English proficiency than the general group, as this could skew the results. Additionally, the study focused on a single high school in Heilongjiang province to maintain consistency in educational context and curriculum delivery. Therefore, the data in this study cannot be extended to people outside of high school, such as primary and secondary school or higher education groups.

This study used peer feedback to improve Chinese high school students' English writing performance. This study will adopt the quasi-experimental

method. This method consists of pre-test and post-test, which is used to organize the students' scores before and after the experiment and prepare for data analysis. Questionnaires were also used to survey students' attitudes and awareness of peer feedback.

1.9 Constitutional and Operational Definitions of Terms

In this study, a number of crucial terminologies have been used. The variables in this research were operationally defined as follows for the purpose of this investigation.

1.9.1 Peer Feedback

In English teaching, peer assessment is often used by teachers as a teaching tool. This type of assessment is aimed at developing learners' knowledge and skills (Patchan & Schunn, 2016), and asks students to actively participate in the entire evaluation process, reflect on the quality of their classmates' work or task performance, and discuss improvement strategies with their peers with reference to task objectives or quality standards, rather than passively accepting others' evaluation (Strijbos & Sluijsmans, 2010). In general, peer-to-peer assessment consists of two components: quantitative evaluation, i.e., scores, and qualitative feedback (Adachi et al., 2017; Berndt et al., 2017). The current study focuses on Chinese high school English (EFL) learners, therefore, peer feedback in this study is students' feedback and suggestions on the content, organization, vocabulary, grammar, and cohesion of peer-written English texts. Peer-to-peer learning, access to information and resources, and peer review and revision of the work. It is a two-way

cooperative English writing teaching activity. In 2016, Patchan and Schunn believe that peer feedback is a way for learners to actively participate in the evaluation process, to think about their peers' performance or the quality of their outcomes, and to discuss improvement strategies with their peers in light of their goals or quality standards (Patchan & Schunn, 2016). In the study, peer feedback was considered as independent variable where it will act at the treatment / experiment in the study.

Peer feedback was implemented in small groups of four students, each consisting of one high-level student, two medium-level students, and one low-level student. These groups engaged in face-to-face, interactive peer feedback sessions, where students provided feedback to each other on their English writing. The feedback was based on a structured peer feedback evaluation form, focusing on five key aspects: content, organization, vocabulary, grammar, and cohesion. The peer feedback process occurred once a week, with each student submitting their writing for review and receiving feedback from their group members. Students were encouraged to discuss their feedback within the group, facilitating collaborative learning and improving the quality of the feedback provided. Throughout the process, the teacher played a guiding role, overseeing the feedback sessions and offering assistance to ensure that the feedback was constructive and aligned with the established criteria. This method allowed students to engage in both giving and receiving feedback, promoting a deeper understanding of the writing process, enhancing their critical thinking, and improving their overall writing skills.

1.9.2 Teacher Feedback

Teachers' written comments is a crucial tool for developing students' writing abilities as well as for acquiring and consolidating linguistic knowledge (Hyland & Hyland, 2012). According to Li (2020), the key to starting and sustaining effective engagement between teachers and students is teacher feedback, which is a crucial component of teacher talk. Teacher feedback means that teachers provide students with evaluation or other information about learning tasks or examination results. In this study, teacher feedback is in the daily teaching activities, teachers are mainly responsible for providing feedback to students. This learning process is the teacher to students' oral or written information, feedback content more detailed and in-depth, and these feedback information is for students writing different aspects, such as word spelling, and some of the text structure design, such as the content and structure of the feedback. In the study, teacher feedback was considered as conventional a way of teaching English writing in the study. In this study, teacher feedback refers to the written comments provided by the instructor on students' essays, focusing on content, organization, vocabulary, grammar, and cohesion. The teacher's feedback was corrective in nature and guided students toward revision to improve their writing skills. The writing tasks were aligned with the syllabus, and students were given clear instructions for each assignment. Teacher feedback played a supportive role, offering help when students needed assistance with revisions or understanding their errors, while peer feedback took the lead in the writing process.

1.9.3 EFL Writing Performance

Kellogg (1994:85) defined writing performance as the judgment of a text, judging the extent to which it performs communicative functions or whether it serves the intended reader's reading purpose. So, writing performance can be graded by certain criteria and presented in the form of data. According to different writing purposes, researchers use different indicators to measure writing performance. According to the Chinese New English curriculum standard (2017, Edition), EFL writing is reflected in the content, structure, language knowledge and so on. High school students are required to choose vocabulary and grammar structure in oral and written expression, to use text cohesion, to improve the coherence of expression, and to design reasonable text structure according to the need of expression. This study also focused on the following aspects of EFL writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence). In the study, writing performance was considered as main dependent variable in the study, where it was measured on its improvement (or lack thereof) in terms of overall writing performance as well as the five sub-components of writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence). EFL Writing Performance in this study referred to students' ability to produce coherent, creative, and well-organized written texts in English. Specifically, it evaluated students' narrative writing skills, focusing on their ability to express ideas creatively, use language accurately, and organize their thoughts logically. By using a narrative writing task, the study assessed how well students could structure their writing, develop ideas effectively, and maintain fluency in language use. This included evaluating

their ability to craft a clear narrative, demonstrate appropriate vocabulary and grammar usage, and ensure the logical flow of events or ideas throughout the text.

1.9.3.1 Idea / Content

Numerous research have looked into how content-related feedback affects writing in second languages. In these studies, feedback on the content refers to comments and questions on the content (Semke, 1984) , general requests for clarification (Sheppard, 1992), and student summaries of the main points, followed by comments on extended topics (Kepner, 1991). A paragraph is usually defined as a sentence consisting of related sentences based on a single central discussion topic (Ploeger, 2000). Content is the details of the topic being discussed in the support or development paragraph. Supporting sentences within a paragraph should be coherent so that they can be combined (Langan, 2006). (Shehadeh, 2011) also defines content as the coverage of a writing topic based on relevant details or subject knowledge. In this study, writing content refers to the coverage related to the topic of writing. Rubrics “(ASR) which is forwarded by Hyland (2003, p. 244) was used to evaluate students’ paragraphs because this technique evaluates different aspects of writing such as content, coherence, grammar, mechanics, vocabulary, etc. specifically in comparison with other techniques which are holistic in nature (Weigle, 2002). In the study, the component of idea / content was part of the larger notion of writing performance which considered as one of the sub-dependent variables in the study.

1.9.3.2 Organization

In ESL and EFL evaluations, writing, language, content, and organization usually contribute to the overall quality of a paper, it is accepted as the three main criteria for the evaluator's grading decision-making process in the classroom and in a large-scale standardized assessment environment (Huang, 2012; Plakans & Gebril, 2016). A high-quality ESL/EFL paper must be well organized and developed, in addition to clear grammatical language, sufficient content and convincing points of view (Huang and Foote, 2010, Han and Huang, 2017; Shi, 2001). Some researchers try to explain the real significance of organization in paper writing (Erdosy, 2004, Freedman, 1992, Plakans & Gebril, 2017, Shi, 2001). Freedman (1992) defines a well-organized article as having appropriate paragraphs, logical thinking, and good transitions between and within paragraphs. Erdosy (2004) reports that experienced raters tend to value the logic of organizational thinking, thematic development, good paragraphs, and organizational coherence when there are no scoring criteria. In addition, Plakans and Gebril (2017) proposed a five-level writing organization scale, in which the writing pattern with attribute selection at level 5 is good, well-executed, and effective, thematic structure and coherence is considered to be broader organizational characteristics. The organization of the articles in this study refers to the appropriateness of paragraphs, the logic of ideas, and the clarity of transitions between and within paragraphs. In the study, the component of organization was part of the larger notion of writing performance which was considered as one of the sub-dependent variables in the study.

1.9.3.3 Vocabulary

Scholars define vocabulary from different angles. A word can be defined as the smallest free form, i. e. the smallest unit that can exist alone. Vocabulary can be divided into different categories according to meaning, function, etc.. Vocabulary knowledge is a process of continuous accumulation (Yang, 2007). Vocabulary accumulation is the process from receptive vocabulary to productive vocabulary (Palmberg, 1987). According to the learner's vocabulary to reflect the students' vocabulary level. For the tested vocabulary level, it includes not only the vocabulary knowledge stored in the memory system, but also the vocabulary ability stored in the mental lexicon. To sum up, vocabulary size plays an important role in vocabulary level, so this study aims to test whether learners' vocabulary level improves according to the change of the number of vocabulary errors. In the study, the component of vocabulary was part of the larger notion of writing performance which was considered as one of the sub-dependent variables in the study.

1.9.3.4 Grammar

Grammar is generally the rule of language, but different scholars have different definitions of grammar. Harmer (1987) argues that grammar is the way words change themselves and form sentences. The grammar of a language is what happens when words become plural or negative, or the order in which we ask questions or join two clauses into a sentence. Richards, Platt and Weber (2003) thought that grammar was a description of the structure of a language and the way in which words, phrases and other units

in the language combined to produce sentences. The most popular grammatical concept proposed by Larsen Freeman (2001) is that grammar is a skill or dynamic process rather than a static domain of knowledge. It has three dimensions: form, meaning, and purpose. English grammar is a series of language rules that have been systematically summarized through the study of English language. Through this series of language rules, we can use the language correctly and reasonably also can carry on the proper expression. In this study, the main content of English grammar can be divided into lexical and syntactic categories. Morphology is the study of morphological changes in words, such as nouns, verbs, adjectives, and so on. Syntax is concerned with sentence structure, such as sentence components, word order and type. In the study, the component of grammar was part of the larger notion of writing performance which was considered as one of the sub-dependent variables in the study.

1.9.3.5 Cohesion/Coherence

As early as the 1960s and 1970s, some scholars began to study the cohesion and coherence of texts. Jakobsen (1960) analyzed the syntactic structure and parallelism in literary texts, so Jakobsen's research is regarded as the earliest study of textual cohesion (Traugott and Pratt, 1980. p.21). In 1962, Halliday and Hasan first classified cohesion into grammatical cohesion and lexical cohesion. Neubauer's (1983) view of coherence is that the text has a whole, clear meaning, thinking should be clear and clear, not a collection of random sentences. Johns (1986) believes that textual coherence exists at two levels, one is reader-based, which means that the reader can read your

text, and the other is text-based, which means that the text is organized. Conor (1984) and McCarthy (1991) hold that discourse coherence is the process by which the reader makes use of the knowledge he has learned and the information he already knows to fill in the gaps in the text through reasoning, thus making the interrupted information connected. In this study, students' writing coherence was measured by grammatical coherence and lexical coherence. In the study, the component of cohesion / coherence was part of the larger notion of writing performance which was considered as one of the sub-dependent variables in the study.

1.10 Summary

This chapter introduces the research, including research background, problem statement, research hypothesis, research questions and research objectives, and research significance. In addition the most commonly used terms were defined throughout the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature related to this research. These studies explore the status of peer feedback in high school English writing teaching. The purpose of this study is to explore whether peer feedback is effective in high school English writing teaching.

2.2 EFL Writing in China

English writing plays a crucial role in EFL education worldwide. Writing instruction is essential for developing students' communicative competence, critical thinking, and academic skills. In various EFL contexts, effective writing instruction includes guiding students in vocabulary usage, grammar application, writing style differentiation, and cultural awareness. Teachers are encouraged to use strategies such as contextualized vocabulary teaching, mind mapping for organizing ideas, and exposure to different text types (e.g., narrative, expository, argumentative) to enhance students' writing proficiency. Moreover, integrating cultural knowledge into writing instruction helps students avoid cultural misunderstandings and improve cross-cultural communication.

In China, English writing is particularly important in senior high schools. The Chinese New English Curriculum Standard (2017 Edition) stipulates that one of the key objectives of English education is to cultivate students' writing

ability. According to the Chinese High School English Curriculum Standards (2017 Edition, revised in 2020), the senior high school English curriculum consists of three levels: compulsory courses, selective compulsory courses, and elective courses. The compulsory course (6 credits) is mandatory for all students and aims to establish a foundational understanding of English, ensuring students reach English academic quality level 1, which is a prerequisite for high school graduation. The selective compulsory courses (8 credits) build upon the compulsory courses and are designed for students who wish to further their English studies. Students must complete these courses before taking the college entrance examination, which is based on both compulsory and selective compulsory course content. In addition, elective courses provide students with the opportunity to study specialized topics such as advanced writing, second foreign languages, and school-based English programs.

The content of the Chinese English curriculum serves as the foundation for developing students' core competencies in English, encompassing six key elements: theme context, text type, language knowledge, cultural knowledge, language skills, and learning strategies. The theme context covers areas such as self, society, and nature, drawing from disciplines like humanities, social sciences, and natural sciences. Text types include both oral and written forms, such as narratives, expository essays, arguments, interviews, and advertisements, alongside non-continuous texts like charts and comics. Language knowledge comprises phonetics, vocabulary, grammar, textual coherence, and pragmatics, all of which are essential for language proficiency.

Language skills are categorized into comprehension (listening, reading, viewing) and expression (speaking, writing), helping students develop a well-rounded command of English. Cultural knowledge introduces both Chinese and international perspectives, covering both material and spiritual aspects of civilization, fostering students' cross-cultural awareness and confidence in their own culture. Finally, learning strategies include metacognitive, cognitive, communicative, and affective strategies, all aimed at promoting independent and lifelong learning.

In the context of English writing instruction in China, teachers should guide students in understanding word meanings through morphological analysis and textual context and encourage the use of resources such as dictionaries to expand vocabulary. In classroom activities, teachers should reinforce key vocabulary within thematic discussions, incorporating them into classroom discourse, group discussions, and peer interactions. Mind maps can be an effective tool for students to organize vocabulary thematically. When students encounter grammatical difficulties, teachers should encourage the use of learning resources such as grammar books, online materials, and dictionaries to develop autonomous problem-solving skills. Furthermore, writing instruction should expose students to various writing styles—narration, exposition, news writing, and academic discourse—highlighting their unique structural and linguistic features. Analyzing these structures enhances students' ability to express ideas effectively in writing. Additionally, teachers should integrate cultural awareness training into writing instruction, helping students recognize cultural differences and avoid culturally inappropriate

expressions. This approach ensures students' writing is not only linguistically accurate but also culturally appropriate for global communication.

2.2.1 Issues Faced by Chinese High School Students in Learning EFL Writing

The Chinese New English Curriculum Standards (2017 Edition) puts forward a series of new requirements for high school English writing, and it also points out the direction for the teaching of senior high school English writing in the future. However, the present situation of English writing teaching in high school is not easy to make it meet the new requirements of the new curriculum standard. The main reason is that high school students still have a lot of writing difficulties in their current English writing study.

First of all, the most common difficulty in senior high school students' English writing is the use of vocabulary. The main perplexity of students in writing teaching is that they have some ideas but cannot find the right words to express them (Gao, 2008). The problem of lack of vocabulary is the first difficulty in senior high school students' writing and learning, both in terms of its frequency and its difficulty (Li & Dong, 2010). However, in contrast to Gao, Sun (2017) believes that the biggest difficulty in senior high school students' English writing should be their grammar difficulties. According to Ho and others (Ho et al., 2019), there are more variations of the predicate in English, which makes it easy for students to make mistakes in this aspect.

In addition to vocabulary and grammar difficulties, high school students have greater difficulties in the use of complex sentences. As mentioned above,

students sometimes use Pinyin instead of the words they want to use because of vocabulary difficulties. This is actually a mother tongue interference error. Students are easily influenced by Chinese thinking, some Chinese words or expressions directly applied to English. Eventually, it became known as “Chinglish” (Liu et al., 2017). In the actual teaching, the students’ learning environment is also the native language cultural environment, and all kinds of knowledge that the students study are deeply branded with the native language thinking (Chen, 2021). This also makes the “Chinglish” problem, as high school students learning English writing one of the long-term difficulties.

By analyzing these challenges, it becomes evident that students’ difficulties in English writing can be categorized into three main aspects: language, content, and discourse. Addressing these challenges is essential for improving students’ writing proficiency. However, beyond these linguistic and structural difficulties, a lack of interest and confidence in English writing has been identified as a major obstacle for high school students in China. Several studies have highlighted this issue. Wang (2019) conducted a survey in a high school in Anhui Province and found that, apart from students’ poor English writing skills and ineffective learning habits, motivation was a significant concern. His study revealed that only 17.14% of the 500 surveyed students expressed some interest in English writing, whereas 20% showed clear resistance to writing tasks. Moreover, his findings suggested that students struggle with internal motivation, face difficulties in accurately expressing their thoughts in writing, and have limited access to writing

resources (D. Wang, 2019). Similarly, Xu (2016) argued that the primary reason students experience anxiety and difficulties in English writing is their lack of confidence and intrinsic motivation. The issue of writing motivation is not limited to high school students. In 2012, Cai conducted a survey of English majors in the second, third and fourth grades of a university. It was found that only a few students were more confident in the study of writing. As a learning stage closely connected with the senior high school stage, the college students' interest in learning writing also shows, the low interest of senior high school students in English writing has a great and far-reaching impact on their future writing study (Cai et al., 2012).

Another significant issue is students' approach to writing tasks. Zhang (2019) conducted a questionnaire survey among first- and second-year high school students and found that the majority of students perceive English writing merely as a task-oriented activity — primarily undertaken to complete assignments and prepare for exams. As a result, students struggle to recognize textual and lexical errors, and their compositions often lack timely feedback from teachers, limiting opportunities for improvement (Zhang, 2019). Teachers' perspectives further confirm these concerns. Zhang & Yuan (2021) investigated high school teachers' perceptions of their students' ideal writing levels compared to their actual writing performance. Their study found that students' compositions often exhibited simplistic sentence structures, a lack of fluency and accuracy, and insufficient creativity, richness, and coherence. Additionally, many students' writing failed to align with the assigned topics and demonstrated weak logical organization, falling short of both teachers'

expectations and the requirements outlined in the national curriculum standards (Zhang & Yuan, 2021).

To sum up, the present situation of senior high school students' English writing study is worrying. And students generally have difficulties in language, content, text, writing study habits, improving writing study interest and so on. In actual teaching, the teacher must act on the symptoms and solve these difficulties pertinently. Only in this way can the high school English writing teaching get out of the present predicament.

2.2.2 Issues Faced by Chinese High School Teachers in Developing EFL Writing

At present, there are still many difficulties in senior high school students' English writing study. These difficulties, on the one hand, are caused by students' own problems. On the other hand, these difficulties also reveal the present poor situation of English writing teaching in senior high school and expose some problems existing in it. Based on the teaching practice and questionnaire survey, many scholars have made a summary of the current situation of English writing teaching in senior high school and put forward the corresponding problem-solving strategies.

In 2018, Xu's study found that, first, teacher-student interaction is not strong in writing teaching, with teachers playing a central role in everything from the arrangement of teachers' compositions to their grading, and students' writing roles being neglected, the teaching of writing tends to focus on the outcome rather than the process; secondly, students lack the training of writing, which

is a slow and complicated task due to the limited time in high school, in order to save time, teachers often reduce the arrangement of writing tasks, which leads to the lack of writing training for students (Xu, 2018). The teaching of English writing has always been teacher-centered, which leads to the lack of teacher-student interaction and the inability to provide individualized feedback in composition correction (Chen, 2016).

In 2010, Liu summarized the problems in the teaching of English writing from the perspectives of teachers and students. On the one hand, students are afraid of English writing and lack of confidence in improving their English writing performance, in addition, the lack of vocabulary accumulation in the writing process leads to the emptiness of the content, and the neglect of the revision process after writing leads to the slow improvement of the English writing level, teachers focus on the writing results rather than the writing process, which leads to the inefficiency of writing teaching (Liu, 2010). Therefore, this study focuses on the use of new feedback, peer feedback in order to improve students' English writing.

Li (2019) also elaborated on the problems existing in the teaching of English writing in senior high schools, focusing only on the final result leads to the slow improvement of students' English writing; secondly, the monotonous teaching method leads to the low interest of students in writing, and the lack of interaction in the teaching process leads to the lack of students' subjectivity (X. Li, 2019). According to He (2016), there are some problems in the teaching of English writing in senior high school, including the lack of rich

teaching models and the rough and single teaching model. Therefore, teachers should focus their teaching on how to combine the use of multiple languages, that is, on the integration of listening, speaking, reading and writing skills, and on encouraging students to apply the various language skills they have learned, express it well in writing (He, 2016). Some scholars also point out that the untimely and inefficient evaluation of English writing in senior high school is one of the factors hindering the improvement of writing teaching

Generally speaking, the teaching of English writing in high school falls into the following predicament: 1) The lack of basic knowledge of language leads to the emptiness of composition. 2) The single teaching method of writing leads to the low interest of students in writing. 3) The lack of English writing training results in the slow improvement of students' English writing level. 4) The single way of correcting compositions leads to incomplete feedback. 5) Students focus on the result and neglect the process of composition revision, which leads to the lack of subjectivity in students' writing. 6) The weak interaction between teachers and students in the whole teaching process leads to the inefficiency of English writing teaching. Based on the present situation of English writing teaching in senior high schools, it is necessary to develop new teaching models to solve the problems in English writing teaching in senior high schools.

2.3 Feedback on EFL Students' Writing

In EFL writing, feedback is a topic that researchers and second language writing teachers pay close attention to (Lee, 2017), this is because feedback is a constructive evaluation of the text, and it is a kind of evaluation pointing to the future writing of learners and the development of the writing process (Hyland & Hyland, 2019).

2.3.1 Definition and Classification of Feedback

The concept of feedback first emerged in the 1860s, and scholars have since provided various definitions. In language learning, feedback is generally regarded as the information learners receive to guide their improvement (Longman, 2000). In the context of writing instruction, it is defined as the input provided by a reader to an author with the purpose of facilitating text revision (Keh, 1990). Writing feedback, whether from teachers or peers, serves to help students identify weaknesses, enhance their writing skills, and improve their compositions through revision (Schunn et al., 2016).

Feedback can be classified based on form, source, and delivery method. In terms of form, feedback can be written or oral, consisting of positive reinforcement, constructive criticism, or corrective suggestions (Zhang, 2018). Regarding its source, feedback may originate from teachers, peers, self-assessment, or automated systems (Zhao, 2010). As for the delivery method, feedback in second language writing instruction typically falls into four categories: teacher feedback, peer feedback, self-assessment, and

automated feedback (Liu, 2015).

2.3.2 Teacher Feedback

In the teaching of English writing as a second language or as a foreign language, as the most widely used type of feedback, the authority of teacher feedback is unanimously recognized by learners. Its effectiveness lies in the fact that teachers' suggestions and encouragement can help students improve their writing skills (Ma, 2018; Yang et al., 2006). Teacher feedback can significantly enhance students' awareness of text organization and structure. From an affective perspective, students tend to be more receptive to teacher feedback than to other forms of feedback, as they perceive it as more authoritative and reliable. Consequently, students are more likely to pay close attention to and act upon teacher feedback, a phenomenon particularly evident in foreign language teaching (Razali & Jupri, 2014).

Despite its advantages, teacher feedback also has notable limitations. In large-class settings with limited resources, the high number of students makes it difficult for teachers to provide thorough and individualized feedback. (Zou et al., 2017). The excessive grading workload often results in rigid or unclear feedback, which students may struggle to fully comprehend, leading to passive acceptance rather than meaningful engagement with revisions (Hyland, 2000; Zhao, 2010). Furthermore, teacher feedback frequently lacks consistency and timeliness, reducing its overall effectiveness (Sun, 2016). Another major concern is that the authoritative role of teachers in the writing process can lead to an overreliance on teacher input. Students may revise

their writing solely based on teacher feedback without developing independent writing strategies or critical thinking skills. Such teacher-centered intervention can diminish students' sense of ownership in the writing process, including drafting, revising, and finalizing their work (Abbaspour et al., 2020). Moreover, the dominance of teacher feedback may negatively impact students' self-confidence in expressing themselves in a second language, further limiting their ability to take risks and experiment with language use (Chen, 2021).

2.3.3 Peer Feedback

It is found that peer feedback plays an active and effective role in the teaching of EFL writing. First of all, peer feedback has a positive effect on the quality of revision. Ruegg (2015) compared the effects of teacher feedback and peer feedback on EFL learners' writing improvement in a Japanese university, and found that teacher feedback leads to more changes in language meaning, the students get higher grammar scores through revision, and the feedback from peers leads to more improvements in text structure and academic style (Ruegg, 2015). Secondly, peer feedback can promote students' autonomy in writing and learning. In 2016, Kurihara has conducted a similar study to see if peer feedback can improve students' writing skills in high school English classes, conducting a 12-week experiment at an academic high school in Japan, the results show that peer feedback is helpful to improve students' writing ability by means of pre-test, post-test and delayed post-test, and the effects persisted after the experiment was over (Kurihara, 2016). In addition, an experimental study (Yang et al., 2013) was conducted within a 12-week

teaching experiment on 60 first-year graduate students in a university, comparing teacher feedback, peer feedback and teacher-peer feedback, which of the three feedback ways is more beneficial to improve students' English writing level, the comparison of teacher feedback and peer feedback in this study is similar to Ruegg's (2015) results, which show that there is no significant difference between the teacher feedback group and peer feedback group in the improvement of writing performance. This proves that the effect of peer feedback on writing ability is not inferior to that of teacher feedback. Finally, peer feedback can help students perceive effective writing by raising reader awareness (Tsui & Ng, 2000; Zhao, 2018). Wu (2013) found that peer feedback has a positive impact on students' writing self-efficacy through a survey of Chinese undergraduate English learners, and peer feedback on the level of students with different levels of writing self-efficacy of writing have a significant role in promoting (Wu, 2013). Lee and Evans (2019) also found that peer feedback has a positive effect on students' writing self-efficacy through a survey of Chinese undergraduate English learners (Evans & Lee, 2019). In addition, some scholars believe that peer feedback can promote students' motivation and participation in writing (Yu et al., 2020).

However, there are some limitations in the application of peer feedback in the teaching of English writing in senior high schools in China. There is a lack of uniform criteria for English writing in senior high schools in China (Gong, 2016). In her research, because of the level of different students, in correcting each other's compositions, evaluation criteria, so there will be different. Some students focus on sentence fluency and word spelling, while others focus on

grammar and sentence patterns, which can lead to great differences in students' writing achievement, students tend to question the results of peers, to a large extent reduce the effectiveness of peer evaluation, change the original implementation of this method. In 2010, Qu (2020) proposed in his research that in the teaching of English writing in high schools, there are three main problems in the teaching practice of using peer feedback: the limitation of senior high school students' English level, the lack of trust between students and the students' attention to forms. In the teaching mode of peer feedback, it is difficult for the students with low English level to find the mistakes or problems in the other students' compositions. In the long run, this leads students to question their partners' English writing ability. He also points out that high school students often pay attention to the form of peer feedback, while neglecting the actual content, the result is that teachers cannot achieve good teaching results in the actual peer feedback teaching (Qu, 2020).

According to the limitations of using peer feedback in high school writing teaching, this study will formulate a unified feedback rule, and conduct peer feedback training before the experiment, let students fully understand the specific steps and rules of peer feedback, in order to explore whether peer feedback can improve writing performance.

2.4 Review of Literature on Peer Feedback in EFL Writing

The influence of peer feedback on EFL writing teaching has received more and more attention (Farrah, 2012; Kurihara, 2017). The following sections provide a systematic overview of peer feedback.

2.4.1 Review of Literature on Peer Feedback

Professor Partridge (1981) was the first scholar to study the attitudes of learners towards peer feedback. In their survey, 12 participants questioned the credibility of peer feedback but were generally positive. Similarly, other researchers have concluded that most students are willing to use and support peer feedback. In addition, some scholars have found that students prefer teacher feedback over peer feedback (Tsui & Ng, 2000). Guo (2011) found that after two months of peer feedback, students became more engaged. In addition, the researchers found that peer feedback increased the authors' awareness of revision and their confidence in writing. Meanwhile, Liu (2015) also points out that peer feedback can enhance learner autonomy. There is still a great deal of controversy over whether to pay attention to the content or the structure when revising the composition of a companion. Many researchers point out that the content of the article should be the primary consideration of feedback (Keh, 1990).

2.4.2 Review of Literature on Peer Feedback in EFL Writing

Many scholars acknowledge the role of peer feedback. Cho and MacArthur's (2010) studies have found that peer feedback corrects more detail errors than student self-feedback, in part replacing teacher feedback (Cho & MacArthur, 2010). Peer feedback can help students have a better understanding of writing requirements, thus deepening the depth of their composition content, peer feedback activities can promote the improvement of students' writing ability (Hu & Lam, 2010). Other researchers have found that peer feedback

improves students' self-correction skills and makes them more self-aware than teacher feedback, and that "relying too much on teacher feedback reduces students' motivation" (Gielen et al., 2010). Compared with teacher's feedback, peer feedback can help students examine the writing content from the readers' perspective (Baker, 2016). Jin (2016) concluded from his research that although students admit that their knowledge level is limited and they are unable to provide comprehensive feedback, they still recognize the advantages of peer feedback, to a certain extent, it improves the enthusiasm of students' writing (Jin, 2016). Most College students think that peer feedback can make up for the deficiencies of teacher feedback (Qiu & Ma, 2017). Yu and Lee (2016) found that both high-and low-proficiency second or foreign language learners are able to provide effective peer feedback through a study of the effectiveness of peer feedback among learners of different language levels (Yu & Lee, 2016a). According to Allen and Mills (2015), high-level learners make more recommendations when using peer feedback than low-level learners (Allen & Mills, 2015). Nguyen (2016) conducted a qualitative research including interviews and classroom observations on peer feedback practice. After analyzing the results, he found that all students had a positive attitude towards peer feedback and peer feedback improved students' meta cognition in English writing. In addition, studies have shown that peer feedback can improve student satisfaction compared to student performance (Alcalde & Nagel, 2019). Yalch, Vitale, and Kevin (2019) found that students with creative and critical thinking skills improved significantly in their writing (Yalch et al., 2019). Second language learners can use peer feedback effectively and improve their writing skills through effective training

(Sánchez - Naranjo, 2019). Peer feedback should be promoted to develop students' English writing ability (Kuyyogsuy, 2019).

At the same time, some researchers also disapprove of the role of peer feedback. In theory, peer feedback is an effective way of feedback, but in practice, it is difficult to carry out in junior and senior high school (Bai, 2013). The operability and accuracy of peer feedback remains to be verified (Zhou, 2013). Zeng Yonghong and Liang Yue (2017) found in their research that peer feedback is not widely accepted because of a lack of trust among students (Zeng & Liang, 2017). Other researchers through empirical research analysis found that any kind of feedback in the short-term implementation of the effect is not obvious, and subject to the experimental process of the interference of subjective and objective factors, therefore, the validity of peer feedback still needs to be further studied (Ye, 2017).

In addition, scholars have found that the training before peer feedback is constructive. Altstaedter (2016) conducted an in-depth study of peer feedback training and found that trained students often give macro-level advice on the type of feedback, such as organization and content. Untrained students often provide detailed comments, such as vocabulary, grammar and punctuation (Levi Altstaedter, 2016). Rachael (2015) explored the relative effects of peer and teacher feedback on students' writing ability and found that students who received teacher feedback performed better in grammar, with no significant differences in vocabulary or content. So, Rachael (2015) advises teachers on grammar and content, and peers on organization and

academic style.

2.4.3 Review of Literature on Peer Feedback in Chinese High School English Writing

In terms of research direction, Chen (2020) conducted a comparative study of teacher feedback and peer feedback and concluded that while high school students generally rely on teacher feedback, but at the same time also hope that their peers can put forward the revision of their own compositions. A single form of feedback cannot fully correct errors in students' compositions, and Professor Li (2017) discusses strategies to improve the effectiveness of peer feedback systems in high school students. In addition, Ni (2013) also made a review on the application of peer feedback in senior high school English writing teaching. In terms of research form, Chen (2020) analyzed the role of teacher feedback and peer feedback in English composition revision through an experimental study. Pei and Jiang (2021) try to arouse people's attention to peer feedback by summarizing the application of peer feedback in English learning.

2.5 Gaps in the Literature

In terms of gaps in theory, although several studies make an effort to apply Activity Theory to explain the teaching of English writing, its influencing elements, and its writing styles, the majority of them concentrate on college English writing classes and seldom ever deal with senior high school students' English writing (Yu & Lee, 2015). According to Liu (2018), writing feedback refers to the reviewer's assessment of the author's work or other

relevant information. Writing feedback can help the writer to recognize the mistakes and shortcomings in his writing and promote the writer to improve his writing ability in the process of revision and rewrite. However, due to the large size of high school classes in China, the rich content of teaching, the tight class hours, and the limited language ability of students and their peers writing feedback has not achieved its intended function. Therefore, how to improve the effectiveness of writing feedback becomes particularly important.

In the limited research on the use of peer feedback strategies, Yu and Lee (2016) explore peer feedback strategies adopted by four Chinese EFL learners from the perspective of Activity Theory. The study finds that participating and cooperative EFL students adopt five main strategies in peer feedback: using L1 (Mandarin) (artifacts), using English writing standard (rules), adopting group activity rules (rules), seeking help from teachers (community), and playing different roles (division of labor). However, their study has only four participants, and the number of subjects is insufficient. In addition, they do not quantify the use of each feedback strategy, so we do not know how often students use these strategies. A number of studies have reached this conclusion by examining only a single peer feedback activity (e.g. Miao Yang, et al., 2006) . Even studies that cover multiple peer-feedback sessions can span as little as a semester (Zhao, 2010). In fact, the improvement of writing ability is not an overnight success, it must be after a period of hard work to be able to improve. Therefore, it is necessary to carry out a follow-up study longer than one semester when examining the effect of peer feedback. This study makes an experimental study of peer feedback on

more students to explore whether this feedback mode is suitable for more senior high school students to improve the current Chinese senior high school students' writing performance and alleviate students' writing difficulties.

Through reading the previous literature, many researchers believe that the training before peer feedback is constructive. Murphy and Nelson's (1998) research shows that EFL learners place a high value on their peers' knowledge and abilities. Altstaedter (2018) went on to conduct in-depth research on peer feedback training and found that trained students often give macro-level advice on the type of feedback, such as organization and content, untrained students often provide detailed comments such as vocabulary, grammar, and punctuation. To fill this gap, this study conducted peer feedback training for EFL learners, they were also asked to give feedback on five aspects: idea/content, organization, vocabulary, grammar, and coherence / cohesion.

Through literature review, we can see that our research on peer feedback applied to English writing teaching has achieved fruitful results, peer feedback also has a positive impact on the teaching of English writing. Meng's (2009) experiment also demonstrates the practical importance of peer feedback in college English writing teaching. In the research object, Chinese scholars mainly concentrates to the higher education section research. Meng's (2009) experiment was conducted on non-English major freshmen, while Bai Liru's (2013) experiment was conducted on English major freshmen. Based on the research of the existing writing feedback, the author finds that

peer feedback can promote the teaching of English writing. The author finds that most of the research objects in the past were college students, and few of them were basic education students. Therefore, there is still a lot of space for the research of elementary and secondary level education. Furthermore, in theory, peer feedback pays more attention to word accuracy. In fact, due to the limitation of class size and grading task, teachers in our senior high school English writing class mainly pay attention to the accuracy of students' language but pay less attention to the structure of the articles. Therefore, this study applies peer feedback to English writing class in senior high school to improve students' language proficiency and to arouse students' attention to the structure of the text.

In the previous research on peer feedback, many scholars tend to compare the overall writing performance before and after the experiment to judge whether peer feedback is effective or not (Wang, 2022), but few scholars compared the specific components of writing achievement, and this study will evaluate the effectiveness of peer feedback model from the above five aspects (Li, 2021), and through the questionnaire after the experiment to determine the subjects' perception of peer feedback.

2.6 Theoretical Framework

In this study, the researcher chose Activity Theory by Engeström (1987) and Cooperative Learning Theory by Slavin (1980) to study peer feedback teaching.

2.6.1 Activity Theory by Engeström (1987)

Engeström's (1987) Activity Theory is a crucial component of Sociocultural Theory by Vygotsky (1920s - 1930s), which originates from Vygotsky's (1978) mediation notion. Activity Theory (Engeström, 1987) emphasizes the interaction between human activities and mental development in the social cultural and historical environment and holds that goal-oriented social practice plays an important role in the cognitive development of individuals. Figure 2.1 is a triangular cognitive model based on the concept of mediation. Mediating artifacts include both physical tools such as pens and computers, as well as psychological tools or symbols (Vygotsky, 1980; Engeström, 2001).

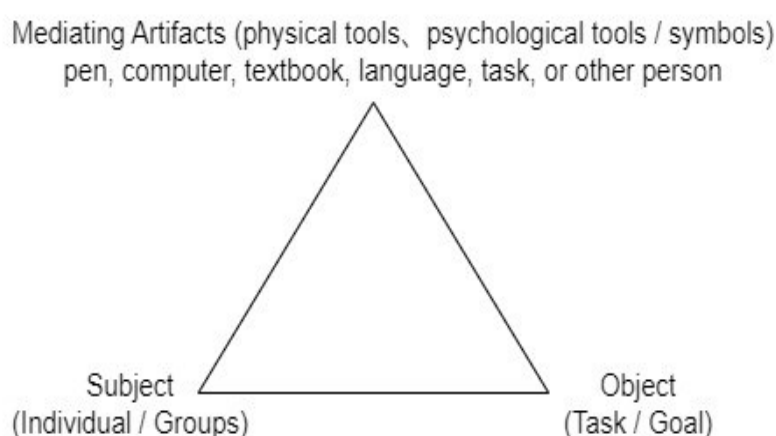


Figure 2.1 : Triangular Cognitive Model of Mediation Concept

As you can see in Figure 2-1, language itself is an aspect of “mediation” and an important component of psychological tools/symbols. Therefore, in the process of learning a language, to achieve the task or goal, the communication and communication between the subject and the outside world, or the communication and communication between groups of subjects

play a huge role. In addition to acquiring language knowledge from textbooks, dictionaries and other tools, teachers' guidance and discussion among students are also important channels to improve knowledge and skills. Solving language learning problems through language will certainly affect students' cognitive development and language ability. With the development of research, the concept of mediation has been extended to Activity Theory (Engeström, 2001). The Activity system "Triangle Model" (Engeström, 1987) is the representative of Activity Theory and the most widely used theoretical framework (see Figure 2.2).

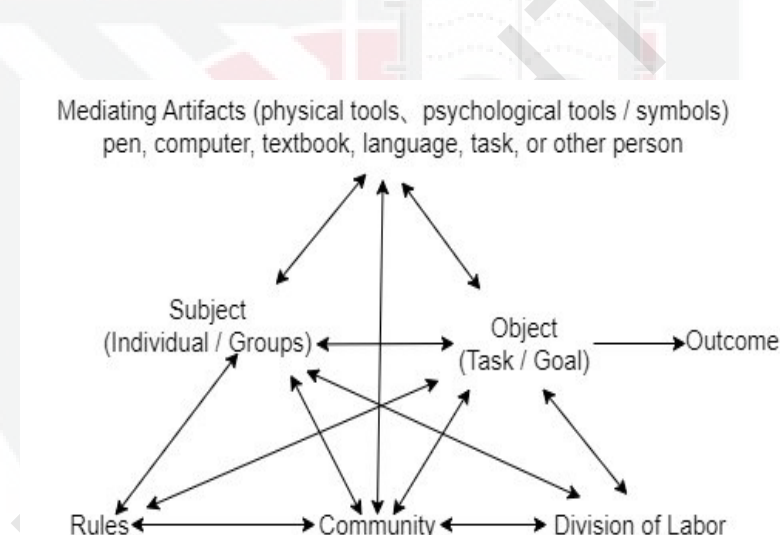


Figure 2.2 : The Triangular Cognitive Model of Activity Theory (Engeström 1987)

As shown in Figure 2.2, three key elements are added to this model: rules, community, and division of labor. These elements are combined to form a socio-cultural context. The subject would not be able to act on the object to obtain results without the involvement of an intermediary, either in the form of an individual or a collective. When teaching English writing, the subject is the individual student or a group of students; the object is the writing task to be

accomplished; the community consists of a teacher, individual students, or a group of students who share a common goal; the mediator is the material or psychological tool that may be used in the writing process; and the rules are the constraints imposed by the environment or the community, such as teacher-student relationships, task requirements, etc. The division of labor refers to the horizontal distribution of tasks and vertical distribution of power among the members of the community, such as the distribution of roles among peers or teacher-student roles.

According to the theory, there are a lot of conflicts that arise when systems with various historical and cultural backgrounds meet. Instead of a simple society, human activity is found in a tremendously complicated network. From the above triangular model, it can be seen that the various elements of human activities are continuously interactive and closely linked, rather than exist in isolation. According to the Activity Theory, peer feedback activity can be regarded as a collective activity in a specific sociocultural context. Teaching writing is a complex process, not only for students to eventually express their thoughts or feelings through words, but also to improve learners' language skills in the process. The teaching process includes both teaching and learning, so if only the teacher's role is emphasized, it will cause learners to be overly dependent and lose the ability to think for themselves; if the teacher's function is neglected it will cause the writing classroom to be uncontrollable and students will fail to achieve the purpose of improving their writing skills because of emotional factors such as distrust in each other. In this activity system, learners as subjects use strategies to promote

cooperative learning to eventually achieve activity goals (Yu & Lee, 2016).

In regard to the idea of mediation tools, it is important to note that in this study, EFL Learners also use mediation tools to provide feedback information, such as pointing out the problems and offering suggestions for revision, to help their peers improve their writing performance. The subject is EFL learners, the object is a peer composition, and the instrument (intermediary) can be a physical tool, such as paper, pen, English writing task, feedback form, feedback criteria. In the feedback process, the teacher or students use these mediating tools to review students' or peers' essays, point out problems in idea / content, organization, grammar, vocabulary, and coherent /coherence in the text, and give feedback to the writer to revise the essay. However, this feedback process does not occur in a vacuum, but in a certain socio-cultural environment.

The social environment of feedback activities consists of three parts: feedback rules, learning community and division of labor. Feedback rules include factors such as timing, feedback format, and criteria. Learning community includes writing teachers, article writers, and other students. The division of labor includes the specific responsibilities of teachers and learners in the feedback task, but also the relationship between learners, their language and writing level. Feedback behaviors of teachers or students are regulated by four factors: feedback mediators, feedback rules, learning communities, and division of labor. These factors either limit or facilitate the development and completion of feedback activities. The model shows the

entire process of writing feedback, highlighting the mediating tools, clarifies that the subject's behavior toward the goal has social properties of the subject's behavior toward the goal, and also shows the dynamics of the interaction of the components of the system. It also demonstrates the dynamics of the interaction of the system's components, which leads to continuous change and development. Feedback is no longer a single individual behavior, but a social collective that occurs in a certain socio-cultural environment.

2.6.2 Cooperative Learning Theory by Slavin (1980)

Another theory that supports peer feedback is Cooperative Learning. The concept of Cooperative Learning was first proposed by Slavin (1980) in the 1970s. Cooperative learning theory posits that in the teaching process, students' learning activities are carried out in groups, and they help each other to complete tasks together (Slavin, 1996). The basic elements of cooperative learning in English writing teaching are as follows: (1) depend on each other: A sense of teamwork and spirit of teamwork are presented. What's more, each member of the team can understand their own tasks, and they all know the team members are indispensable. (2) face to face communication: The successful realization of group goals is inseparable from effective communication among team members. (3) personal responsibility: The successful realization of the group is the result of the joint efforts of each member of the group. A prerequisite for cooperative learning theory to be effective is students' sense of responsibility for themselves and the members of the group. However, as high school students, students always have a

negative psychology such as lack of confidence and retreat because of their own achievement level and learning ability, and thus cannot effectively communicate with group members to accomplish group learning goals. In these situations, the teacher's guidance and assistance are especially important. Teachers can use their knowledge base and skills, psychological knowledge, and other aspects to encourage and guide students, helping them to build up their confidence, fulfill the responsibilities they should fulfill, and better accomplish their learning goals. (4) group arrangement: The successful implementation of the group task is closely related to the assignment of the group members, so the level of the team members is the direct factor, which affects the completion of the assignment. (5) group communication skills: This is reflected not only in the learning groups formed by students, but also in the communication between teachers and students. The teacher becomes the organizer, guide, and advisor of the classroom activities, providing the necessary support and assistance to the individual students and the learning groups. Such a combination of group learning and teacher-led learning can effectively reduce the fatigue caused by the teacher's single lecture or the learning lag caused by the teacher's delayed correction, and on the other hand, the diversification of learning methods can also enhance students' motivation and improve the accuracy of group communication learning. So, combining cooperative learning with English teaching can enhance learners' English communication ability.

And for peer feedback, Vygotsky (1978) says that the development of culture and society can promote learning and cognitive enhancement. Namely,

learning is a social interaction, which appears in personal and social life. Thus, it can be seen that peer feedback is social activity where the course of learning takes place. The researcher thinks that peer feedback consists of cooperative activity. The members of groups can give some comments on peers' compositions through peer feedback. Meanwhile, students can find some errors in idea / content, organization, grammar, vocabulary or coherent / coherence, which is similar to their own compositions, and then they will avoid errors another time. So, after giving comments on peers' compositions, the consciousness and ability of error recognizing is improved. This pattern can be seen as the process of cooperative learning. Johnson and Johnson, (1986) point out that group learning can make participants obtain more knowledge than learning alone. In addition, it can keep the memory longer than before. Students take responsibility for learning by themselves and take part in the discussion, which makes their thinking more critical. To some extent, students participate in cooperative activities, which provide their learning atmosphere and stimulate their autonomy. Thus, integrating cooperative learning into writing teaching can make up for the deficiency of English teaching.

In regard to the context of the study, the researcher argues that through the use of peer feedback and based on the change of the roles of teachers and students in the writing lesson, students help each other through cooperative learning and through the principle of grouping in giving and receiving peer feedback. To illustrate, in this study, the teachers first divide the students into groups reasonably before implementing peer feedback in English writing

class, according to the various levels of participation at the high, medium and low levels and the gender balance. This division of students would have enabled the members of the group to learn from each other and they would have been trained accordingly, to make students understand the basic elements of cooperative learning and to complete the task. In the process of peer feedback, teachers will inspect the classroom and give students timely guidance; after peer feedback, help students reflect on the implementation of peer feedback, timely adjustment of strategies, to improve the efficiency of cooperative learning. In the mutual cooperation between English teachers and students, it can effectively arouse students' enthusiasm in English writing, and also improve students' English writing level.

In this study, the Activity Theory by Engeström (1987) and Cooperative Learning Theory by Slavin (1980) are integrated to support the application of peer feedback in English teaching, as illustrated in Figure 2.3. Activity Theory provides a framework for understanding how EFL learners engage in peer feedback. In this process, the subject is the EFL learner, the object is a peer's composition, and the instrument (intermediary) includes various mediating tools such as paper, pens, English writing tasks, feedback forms, and feedback criteria. Through these mediating tools, teachers or students review peer essays, identify issues related to content, organization, grammar, vocabulary, and coherence, and provide feedback for revision. This theoretical perspective emphasizes the role of social interaction and tools in facilitating learning, making it particularly suitable for analyzing peer feedback in EFL writing instruction. Meanwhile, Cooperative Learning Theory highlights

the social and interactive nature of learning, which is essential in peer feedback activities. According to Johnson and Johnson (1986), five key elements—mutual trust, face-to-face interaction, personal responsibility, group collaboration, and communication—contribute to effective cooperative learning. These elements enhance the effectiveness of writing feedback within study groups, allowing students to improve linguistic accuracy, increase writing frequency, and develop motivation in a supportive and engaging environment. More importantly, through collaboration with peers of different proficiency levels, students refine their English writing skills and critical thinking.

Additionally, the Peer Feedback Orientation Scale (Kasch, Van Rosmalen, Henderikx, & Kalz, 2022) offers a structured framework to understand how students perceive and engage in peer feedback. This scale includes five key dimensions—accountability, communicativeness, utility, self-efficacy, and receptivity—which align with Activity Theory and Cooperative Learning Theory in various ways. Accountability is emphasized in Cooperative Learning Theory through individual responsibility, ensuring that students actively engage in peer feedback rather than passively relying on others (Slavin, 1980), while Activity Theory reinforces this through mediating tools, such as structured rubrics, which help students systematically assess and justify their feedback. Communicativeness, a core component of Cooperative Learning Theory, highlights the necessity of effective interaction in peer feedback, facilitated by face-to-face discussions and written comments, which promote collaborative knowledge construction. Activity Theory supports this

by emphasizing the role of language and feedback tools in mediating communication. Utility, or the practical application of feedback, is explained by Activity Theory as the process through which students integrate peer feedback into their revision process, ensuring that feedback serves a meaningful purpose, while Cooperative Learning Theory reinforces this by encouraging peer discussion on how to apply suggestions effectively. Self-efficacy is another critical dimension, as Cooperative Learning Theory posits that group support enhances confidence in learning, helping students develop a sense of competence in writing evaluation. Activity Theory complements this by emphasizing that feedback tools and structured guidance support students in building self-efficacy through practice. Finally, receptivity is essential in the learning process, as Activity Theory underscores that learning is socially mediated, requiring students to be open to feedback for meaningful progress. Cooperative Learning Theory further promotes receptivity by fostering a non-judgmental, constructive environment, which increases students' willingness to accept and apply feedback in their writing revisions.

A key methodological consideration in this study is the composition of peer feedback groups, as grouping strategies significantly influence the effectiveness of peer feedback. Research suggests that when students of similar writing proficiency are grouped together, they may struggle to identify each other's weaknesses, resulting in limited writing improvement. Therefore, following the principles of Cooperative Learning Theory, the 150 students in the experimental classes were divided into three groups based on pre-test

scores, ensuring that each group contained members with varied English writing proficiency. This heterogeneous grouping aimed to maximize peer learning benefits, enabling students to identify errors more effectively, exchange constructive feedback, and enhance their writing competence. Furthermore, by aligning with the Peer Feedback Orientation Scale, the study ensured that students' accountability, communicative skills, and receptivity to feedback were supported through structured rubrics and teacher guidance, fostering an effective peer feedback environment.

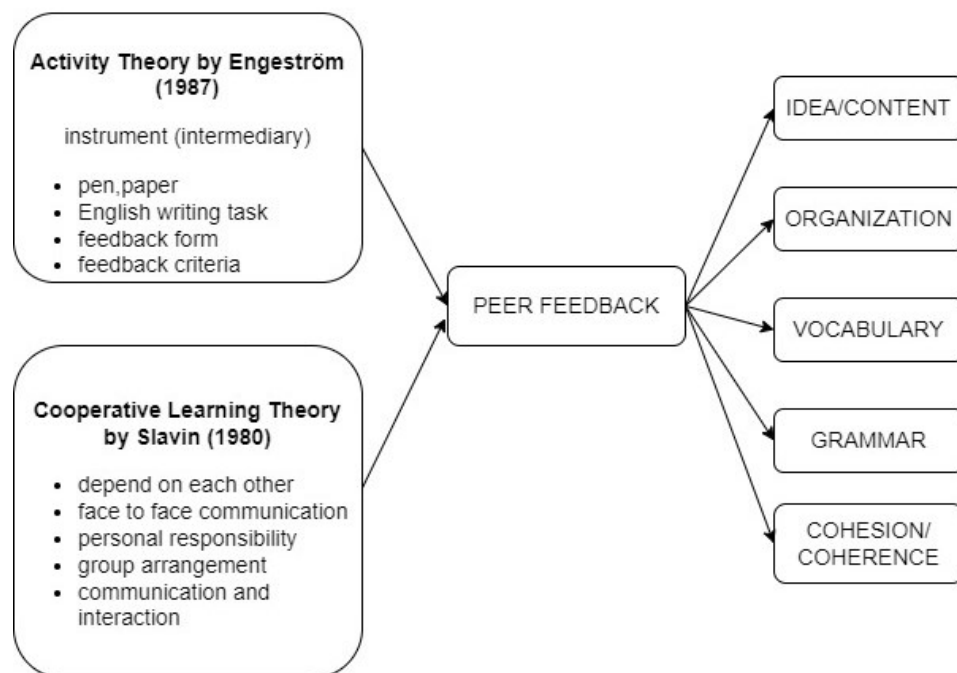


Figure 2.3 : Underpinning Theories

2.7 Conceptual Framework

A conceptual framework is constructed based on Activity Theory by Engeström (1987), Cooperative Learning Theory by Slavin (1980) and a literature review. Activity Theory is concerned with promoting peer feedback

in English writing teaching. It is worth noting that this conceptual framework is a combination of Activity Theory and Cooperative Learning Theory. The factors affecting the use of peer feedback in EFL writing teaching include: the performance of writing teaching, which involves ideas/content, organization, grammar, vocabulary, and cohesion/coherence. According to Engeström (1987), the model is made up of a subject, an object, mediating artifacts, rules, a community, a division of work, and an outcome. The subject acts on the object and transforms it into an outcome, according to the triangle model. However, this process is not “void”; rather, it is shaped and constrained by mediating objects, rules, communities, and labor divisions.

In this framework, teacher feedback plays a critical role as a guiding tool for peer feedback. Teacher feedback functions as a mediating artifact, helping students understand how to provide constructive and meaningful feedback to their peers. Teacher feedback does not act in isolation; it facilitates peer interactions by offering guidance on how to approach feedback, what aspects of writing to focus on (e.g., content, structure, grammar), and how to formulate constructive suggestions. In this way, teacher feedback aligns with the principles of Activity Theory, where feedback serves as a tool within the broader educational activity system, guiding students to interact with each other and engage in meaningful writing improvement.

Cooperative Learning Theory (Slavin, 1980) further supports this process by emphasizing the collaborative nature of peer feedback. In a cooperative learning environment, peer feedback becomes an integral part of the learning

process. Teacher feedback encourages students to engage actively in peer feedback, fostering a collaborative atmosphere where students learn from each other, enhance their writing skills, and contribute to the overall learning of the group. Teacher feedback helps students understand how to approach peer feedback with a mindset of collaboration, ensuring that feedback is not only critical but also supportive and constructive, aligning with the cooperative learning principles of mutual benefit and shared responsibility.

Based on the conceptual framework, this study aimed to explore the effectiveness of peer feedback in EFL High School English writing teaching, and to examine whether and what factors affected high school students' writing performance. Thus, the independent variable was peer feedback, and the dependent variable was EFL writing performance (i.e., idea, organization, vocabulary, grammar, and cohesion). According to Figure 2.4, peer feedback activity system parts are made up of the following elements: community, division of labor, outcomes, feedback topic, feedback mediating artifacts, feedback object, and feedback rule. The subject is EFL learners, the object is a peer composition, and the instrument (intermediary) can be a physical tool, such as paper, pen, English writing task, feedback form, feedback criteria.

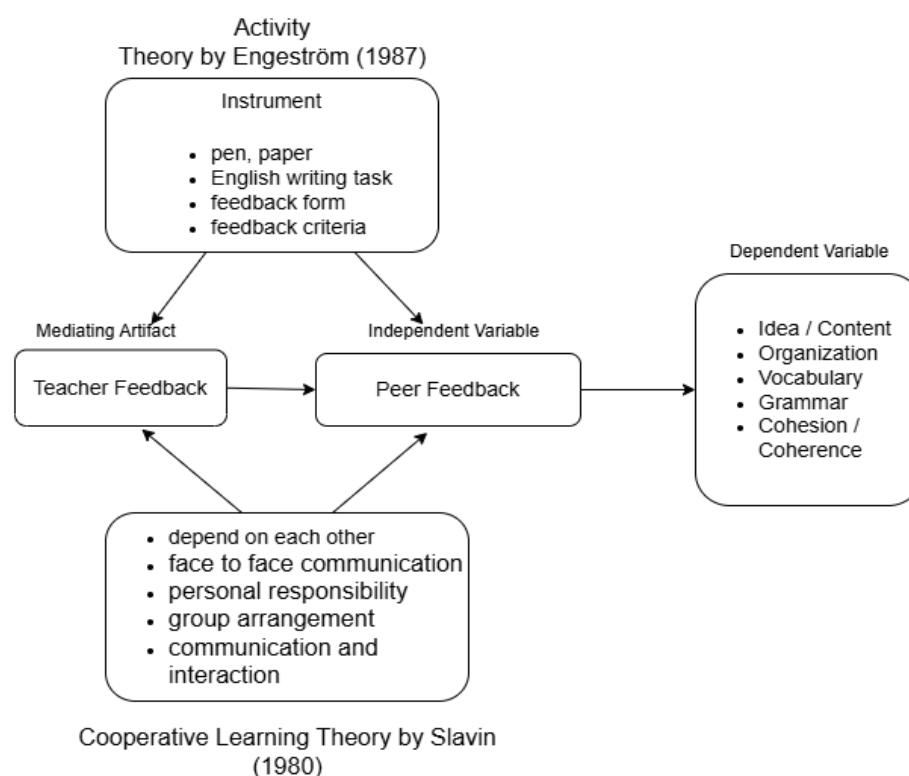


Figure 2.4 : Conceptual Framework of the Study

As shown in the figure 2.4, this study investigated the use of peer feedback in senior high school English writing teaching, mediating artifacts includes feedback time, feedback form, English writing scoring criteria. A quasi-experimental study design which was more fully detailed in the following chapter has been made possible by the conceptual framework.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods and techniques employed to fulfil the study's objective. The discussion covers the following sub-headings: (1) Research design, (2) Research Method, (3) Research setting, (4) Research population, sample and sampling technique, (5) Research instruments, (6) Pilot study, (7) Validity and reliability, (8) Data collection, (9) Ethical Considerations and (10) Data analysis.

3.2 Research Design

To ascertain the effect of peer feedback on the writing abilities (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence) and to examine Chinese high school students' perceptions of peer feedback and their English writing ability, this study employed quantitative research methods..Specifically, a quasi-experimental research design was used to examine (1) the impact of peer feedback on students' writing performance (i.e., idea/content, organization, vocabulary, grammar, and cohesion/coherence), (2) the factors related to peer feedback that influence students' writing performance, and (3) students' perceptions of peer feedback on their English writing ability.

Quantitative research focuses on the collection and analysis of numerical data, emphasizing objectivity and generalizability (Brymen, 2012). It enables

researchers to quantify findings, allowing for statistical analysis and broader population inferences. Large and representative samples are typically used to ensure the reliability of the results (Martin & Bridgmon, 2012). This study adopted a quasi-experimental research design, utilizing structured procedures and standardized instruments to collect data. In quantitative research, structured methodologies help answer “how many” and “to what extent” questions, providing measurable and comparable insights (Rasinger, 2013).

Quantitative research has some advantages. Quantitative studies involve larger samples that are randomly selected, so quantitative results may be generalized to the entire population or sub-population (Carr, 1994). Data analysis is done more quickly by using statistical software like SPSS in addition to sampling (Connolly, 2007). What's more, quantitative research can evaluate a variety of factors and is to be based on the positivist paradigm of measuring variables (Carroll & Bailey, 2015). Therefore, this study was designed to test different variables using quantitative research.

This study adopted a Nonrandomized Control Group Pre-test-Post-test Design, which is a common quasi-experimental design in educational research. In this design, participants were assigned to groups based on their existing class enrollment rather than random assignment. A pre-test was administered to assess students' initial writing performance, followed by an intervention period where different types of feedback were provided to different groups. After the intervention, a post-test was conducted to measure

the impact of feedback on writing performance.

To comprehensively evaluate the effects of peer feedback on students' writing performance, this study employed a three-group design. The Control Group (CG) received only teacher feedback, serving as a baseline for comparison. Experimental Group 1 (EG1) received only peer feedback, allowing for an assessment of the impact of peer interactions on writing development. Experimental Group 2 (EG2) received both teacher and peer feedback, enabling an examination of whether a combination of feedback sources yields greater improvements in writing performance than either source alone. This design facilitated a structured comparison to determine the relative effectiveness of different feedback types. The control group (CG) served as the baseline, allowing the effects of peer feedback to be isolated and compared against traditional teacher feedback. EG1 helped examine the impact of peer feedback alone, while EG2 provided insights into whether a combination of teacher and peer feedback was more effective than either alone. This design was selected to align with the study's research questions and to provide a clear comparative structure for data analysis.

The study was conducted over two months, with students completing eight writing exercises (one writing exercise per week). The pre-test and post-test assessed students' writing abilities in terms of idea/content, organization, vocabulary, grammar, and cohesion/coherence (RQ1). The intervention phase involved administering feedback according to group assignments, ensuring consistency in evaluation criteria. To investigate the factors

influencing peer feedback effectiveness (RQ2), the Peer Feedback Orientation Scale (Kasch, Van Rosmalen, Henderikx, & Kalz, 2022) was used. This scale assesses five key dimensions (accountability, communicativeness, utility, self-efficacy, and receptivity) providing a comprehensive understanding of students' orientations toward peer feedback. Additionally, to explore students' perceptions of peer feedback (RQ3), a separate questionnaire was administered at the end of the study. Table 3.1 illustrates the study design:

Table 3.1 : Overview of Study Groups and Feedback Types

Group	Feedback Type	Pre-test	Post-test	Questionnaire on Peer Feedback Orientation in English Writing	Questionnaire on Students' Perception
Control Group(CG)	Teacher Feedback only	√	√		
Experimental Group 1 (EG1)	Peer Feedback only	√	√	√	√
Experimental Group 2 (EG2)	Teacher and Peer Feedback	√	√	√	√

This structured quasi-experimental design enables a systematic investigation of the research questions and ensures that findings are grounded in empirical evidence.

3.3 Research Method

This study used a quasi-experimental approach to determine the effects of peer feedback on EFL writing performance in general, and the components of

idea / content, organization, vocabulary, grammar and coherence and cohesion in specific. A subgroup of non-trials known as quasi-experiments makes an effort to replicate real, randomised experiments in a rigorous and experimental structure but does not use random assignment (Kirk & E, 2009). Furthermore, although a control group can be used in quasi-experimental investigations, a true control group is not necessary. Another experimental group, the control group, also underwent several experimental procedures (Miller et al., 2019). For the current investigation, a quasi-experimental research approach was used (Creswell, 2014). Due to the fact that they are created using real-world scenarios, quasi-experimental studies are widely used in educational settings (Miller et al., 2019).

This study includes a control class and two experimental classes from intact groups that are readily available in Jixi first middle school. The three classes were found by looking at average English scores, average English writing scores, male-to-female ratio, and progress in teaching. Through such criteria, groups are ensured to be similar to each other in terms of background and writing performance for purposes of validity and reliability. In answering the question on the effectiveness of peer feedback on students' writing ability, the quasi-experimental method was used to determine students' EFL writing performance in general, and the components of idea /content, organization, grammar, vocabulary and coherence / cohesion more specifically which hopefully would change after the 8 weeks experiment of comparing the use of the traditional and more conventional teacher feedback with the use of peer feedback and also through the combination of teacher and peer feedback.

This would be done through the means of pre-test and post-test in between the duration of the experiment. As for the second objective of the study, the researcher is also keen to study Chinese EFL high school students' perceptions of peer feedback and their English writing, through which this study adopted the survey questionnaire.

The study participants are 150 sophomores from three classes in a Chinese public high school. These classes were pre-existing, and their assignment to experimental conditions was based on a quasi-experimental design. Prior to the study, an English writing proficiency test was administered to ensure that the three classes had comparable baseline writing abilities. The results indicated no significant differences among the groups. The assignment of classes to different conditions was not entirely random but followed a structured approach. In consultation with the school administration and teachers, the class that adhered to the traditional instructional approach, relying solely on teacher feedback, was designated as the control group (CG). The second class was assigned as Experimental Group 1 (EG1) to examine the effects of peer feedback alone, while the third class was designated as Experimental Group 2 (EG2) to explore the combined effects of teacher and peer feedback. This grouping was determined based on practical considerations, including the willingness of teachers and students to adopt the respective feedback methods and the feasibility of implementation within the school's instructional framework.

The first class ($n = 50$) was designated as the control group (CG) because it followed the traditional instructional approach, receiving only teacher feedback. The second class ($n = 50$) was assigned as Experimental Group 1 (EG1) to examine the effects of peer feedback alone. The third class ($n = 50$) was designated as Experimental Group 2 (EG2) to explore the combined effects of teacher and peer feedback. Before the experiment, a pre-test was conducted to ensure that the three groups had similar English writing proficiency. A post-test was administered after the two-month intervention to assess the impact of different feedback methods on students' writing performance. Students were given 20 minutes to complete their writing tasks, during which they received specific feedback based on their group assignments (i.e., CG received only teacher feedback, EG1 received only peer feedback, and EG2 received both teacher and peer feedback). Additionally, to ensure that students in the experimental groups were adequately prepared for peer feedback, those in EG1 and EG2 underwent peer feedback training before the experiment. After the experiment, 100 students from the experimental groups (EG1 and EG2) completed a questionnaire to assess their perceptions of the effectiveness of peer feedback compared to teacher feedback in the Chinese EFL writing context. The collected data will be analyzed using SPSS software.

3.4 Research Setting

The study was conducted in a high school in Jixi City, Heilongjiang Province. Jixi is located in the northeast of China and southeast of Heilongjiang Province. It is adjacent to Russia and has a total area of 22,531 square

kilometers with about 1,502,100 people. It is the earliest place where the sun rises in China and it has become a comprehensive city with a full range of industries, all-round economic development and comprehensive urban services. There are 22 regular high schools with 26,979 students in Jixi.

This study was conducted in Jixi first middle school, a government-run full-time secondary school. It was founded in 1952 and the Songjiang Provincial Education Department approved the establishment of the Songjiang Province Jixi Middle School. On June 19, 1954, it was renamed “Heilongjiang No. 1 middle school in Jixi. In 1980, it was identified as one of the first key secondary schools in Heilongjiang. In 1992 was evaluated as the province’s advanced key middle school. In 2002, the first batch was promoted to Heilongjiang’s model ordinary high school. This study was conducted in the high school section, considering the effectiveness of peer feedback. Located in Jixi’s Jiguan New District, the school covers an area of 155,000 square meters, with 73,000 square metres of construction and 45,000 square meters of green space. The campus has a teaching building, a comprehensive office building, an experimental building, a library, a lecture hall, an art and Sports Building, a student dormitory building, a restaurant building, etc., the building has a first-class Science and technology museum, National Museum, Geography Museum, History, Art Museum and robot room and other places, fully able to meet the needs of the characteristic curriculum construction. The school has opened the Internet, the campus website construction has begun to take shape, the information-based education environment is taking shape, teachers’ modern education and teaching

technology hardware level is rapidly improving. The school has 430 teaching staff, 9 special-grade teachers, 183 senior teachers, 41 national and provincial-level backbone teachers, 4 top-notch municipal talents, and 9 municipal-level famous teachers, there are 57 teachers with graduate degree. The structure of academic qualifications, age structure and discipline structure of the teaching staff fully meet the needs of education and teaching and school sustainable development.

Writing in English has always been a challenge for Chinese EFL learners, especially in small towns like Jixi, which is located on the Chinese border. The Jixi First Middle School was selected as the research site because, although its overall English performance improved in the 2022 academic year, its English writing scores remained relatively unchanged. To illustrate this, Table 3.2 presents the average English and writing scores of second-year students at Jixi First Middle School in the 2021/2022 and 2022/2023 academic years. The total score for the English subject is 120 points, of which writing accounts for 25 points. While the overall English scores showed a steady increase from 87.3 in the first exam of the second semester (2021/2022) to 92.6 in the final exam of the first semester (2022/2023), the writing scores remained largely stable, fluctuating between 15.3 and 16.0 points. This stagnation in writing performance, despite overall improvement in English, highlights the need for further research into writing instruction methods. Therefore, this school was chosen as the research setting to investigate how different feedback strategies might enhance students' writing abilities.

Table 3.2 : English Scores of Jixi First Middle School in 2022

Semester	Exam Type	Overall English Score (out of 120)	Writing Score (out of 25)
Second Semester 2021/2022	First Exam	87.3	15.8
	Mid-term Exam	88.4	15.9
	Final Exam	89.5	15.3
First Semester 2022/2023	First Exam	89.9	15.9
	Mid-term Exam	91.3	16.0
	Final Exam	92.6	15.4

3.5 Research Population, Sample and Sampling Technique

The targeted population in this study is sophomores at Jixi first middle school, aiming to use peer feedback strategies in EFL writing in Chinese high schools to explore whether it is effective for students' writing performance, and the students' perception on peer feedback.

Jixi first middle school has 4,650 students, including 1,200 in junior middle school and 3,450 in senior middle school. This study is to conduct peer feedback teaching, for students' English level has certain requirements, so the researcher choose to conduct the study in a senior middle school, which is senior one, senior two, senior three school years, because the students of grade one have just entered school and their English scores are relatively undetermined in their English writing performance; meanwhile, the students of grade three are facing the great pressure of the college entrance examination and are not suitable for the research, so this research will be conducted among the students of grade two. There are a total of 22 classes in senior high school. This study selected three classes from them for the experiment, ensuring that the number of students in the three classes was

equal and the ratio of men and women was close. Most importantly, the average English writing performance scores were similar, and there was not much difference in writing scores among these three groups of students.

Quantitative methods can be used to extrapolate from smaller populations to larger populations and we need to pick the most accurate smaller group to represent the larger group. This is called the sampling. Sampling refers to the process of choosing a statistically representative sample of people from the target population (Kamangar & Islami, 2013). Because the community of interest typically consists of too many people for any research endeavour to involve as participants, sampling is a crucial tool for research investigations. A good sample is one that statistically represents the target population and is sizable enough to provide an answer to the research issue (Taherdoost, 2016a).

True to the nature of quasi-experimental research, this study employed purposive sampling, a non-probability sampling technique in which participants are deliberately selected based on specific criteria to align with the research objectives. Unlike random sampling, which aims for broad generalizability, purposive sampling allows for the intentional selection of participants who best fit the study context (Taherdoost, 2016b). This method was chosen because it enables the researcher to control extraneous variables, ensuring that the selected classes were academically comparable and that differences in writing performance could be attributed to the feedback interventions rather than external factors. Additionally, purposive

sampling is cost-effective and practical, especially in educational settings where random assignment is often infeasible due to institutional constraints (Bhardwaj, 2019).

To confirm that the three intact classes were academically equivalent, an analysis of their previous semester's English test scores was conducted. The average English scores for the three selected classes in the first semester of the 2022/2023 academic year were 96 out of 150, while the total writing score was 25. The average writing scores of the three classes were 16.3, 16.9, and 16.7, respectively, indicating minimal variation in their English writing proficiency. These results suggest that the writing abilities of the three groups were comparable at the beginning of the study. Furthermore, the selected classes were parallel classes, meaning they were formed based on students' prior academic performance rather than ability grouping, reducing the likelihood of significant differences in their overall English proficiency. The gender ratio in each class was also similar, which helped control for potential gender-related differences in writing performance.

Beyond academic comparability, instructional consistency was a key consideration in the selection process. The three classes followed the same curriculum, used the same English textbook, completed the same course assignments, and had identical weekly class hours and schedules. Additionally, all three classes were taught by teachers with similar qualifications, each recognized as an outstanding teacher within the school. This consistency ensured that differences in writing outcomes could be

attributed to the type of feedback provided rather than variations in teaching quality or instructional materials. Based on this selection, one class was assigned as the control group (CG), continuing with only teacher feedback in writing instruction, while the two experimental groups received different feedback interventions: the first experimental group (EG1) received only peer feedback, and the second experimental group (EG2) received a combination of teacher feedback and peer feedback. Through this purposive selection process, the study ensured that the sample was as representative as possible of the larger student population while maintaining experimental control and minimizing confounding variables.

3.6 Research Instruments

The purpose of the study was to ascertain how peer evaluation affected students' writing abilities. Therefore, it is important to choose the most appropriate research instruments to collect the data (Carroll & Bailey, 2015). The most appropriate way to measure students' writing ability is to ask them to write (Miller et al., 2019). Hence, there are three instruments in this study.

3.6.1 English Writing Tests

The first instrument used in this study is the English writing tests, consisting of a pre-test administered before the experiment and a post-test conducted afterward to determine whether there are significant statistical changes in students' writing performance. The writing tasks were carefully selected based on the requirements of the new curriculum standards and the students' existing knowledge base to ensure both validity and reliability. To minimize

practice effects, the pre-test and post-test were designed to focus on practical writing, which is a frequently tested genre in Chinese English writing assessments. Practical writing is closely related to real-life communication and includes commonly used formats such as letters, notices, and announcements. These forms of writing require students to organize information coherently, use appropriate grammar and vocabulary, and demonstrate their ability to convey key messages effectively. By ensuring that the tasks align with the standard assessment framework, the study reduces the likelihood that students would gain an unfair advantage from prior exposure to similar tasks in their textbooks.

The pre-test was conducted before the experiment to assess whether the writing ability of the three selected classes was initially comparable. The writing task for the pre-test was adapted from the 2021 China National College Entrance Examination English writing theme, in which students were required to write a speech for an English speech contest. Although this task had been previously introduced in textbooks, it was selected because it required students to demonstrate their ability to use guided writing strategies rather than rely on direct memorization. Students were given 40 minutes to complete a 200 – 250 word composition based on specific prompts, ensuring that their responses reflected their actual writing abilities rather than prior rote learning. After the two-month intervention, the post-test was administered to evaluate whether the different feedback methods had affected students' writing proficiency. The post-test was based on the 2020 China National College Entrance Examination English writing theme, which required students

to write an introduction to farm picking. While this topic may seem different from the pre-test in terms of content, both tasks belong to the genre of practical writing, requiring students to present information clearly, maintain logical coherence, and use appropriate linguistic structures. To further ensure test reliability, the post-test followed the same time constraints (40 minutes) and word limit (200 – 250 words) as the pre-test, maintaining consistency in task difficulty and evaluation criteria.

By selecting tasks from official national examinations, this study ensures that the writing prompts are valid, standardized, and appropriately challenging. Furthermore, using two distinct, yet comparable writing tasks mitigates the risk of students reproducing memorized responses while allowing the study to accurately assess the impact of different feedback methods on their writing development. The specific writing prompts used for both tests are provided in Appendix A and Appendix B.

3.6.2 EFL Writing Performance Grading Criteria and Grading Rubric

The second instrument is writing performance grading criteria and grading rubric, which is also the Chinese college entrance examination scoring system.

Teachers should evaluate students' compositions from the aspects of content, word count, text structure, context cohesion, grammatical structure, word accuracy and writing. The grading criteria determine students' overall writing performance. The grading criteria also include concept/content, organization,

vocabulary, grammar, and cohesion/coherence. The total score is 25 points, according to 5 grades to points. When grading, the level is initially determined by the article's content and language, followed by a measurement of the level of the requirements to define or alter the level, and finally by the final score. For words less than 200 and more than 250, subtract 2 points from the total score. The major criteria for grading an essay are the content's main points, the article's organization's logic, the quantity and precision of the vocabulary and grammatical constructions used, and the context's coherence. Language accuracy includes things like spelling and grammar, which should be judged according to how they affect communication. If the writing is poor and affect communication, they would be reduced by a grade. See Appendix C for specific grading criteria and grading rubric.

As part of the treatment, the following instrument is peer feedback evaluation form. The study feedback evaluation form is based on Zhu's peer feedback in the teaching of English writing in senior high schools in the design of the feedback table (Zhu, 2013). The evaluation form consists five parts: idea / content, organization, vocabulary, grammar, and cohesion / coherence. Refer to Appendix C for specific peer feedback evaluation forms.

A number of scholars (see Nelson & Murphy, 1993; Villamil & de Guerrero, 1998) have shown that pre-feedback training can enhance the effectiveness of peer feedback. In the context of this study, because students have not been exposed to writing peer feedback before, there is a need for training on more effective peer feedback to regulate student behavior for the treatment of

this study. To address this, students in the two experimental groups (EG1 and EG2) participated in eight sessions of peer feedback training before the experiment commenced. This training included explicit instruction, modeling, guided practice, and self-reflection activities, designed to help students understand feedback criteria, structure their comments effectively, and engage in constructive peer interactions. The specific training process is outlined in Figure 3.1. In contrast, the control group (CG) did not receive any peer feedback training and continued with regular writing instruction without structured peer interaction. The teacher feedback group, on the other hand, received direct written feedback from the instructor on their drafts instead of peer feedback. This allowed for a comparative analysis of the effects of peer feedback training versus traditional teacher feedback.

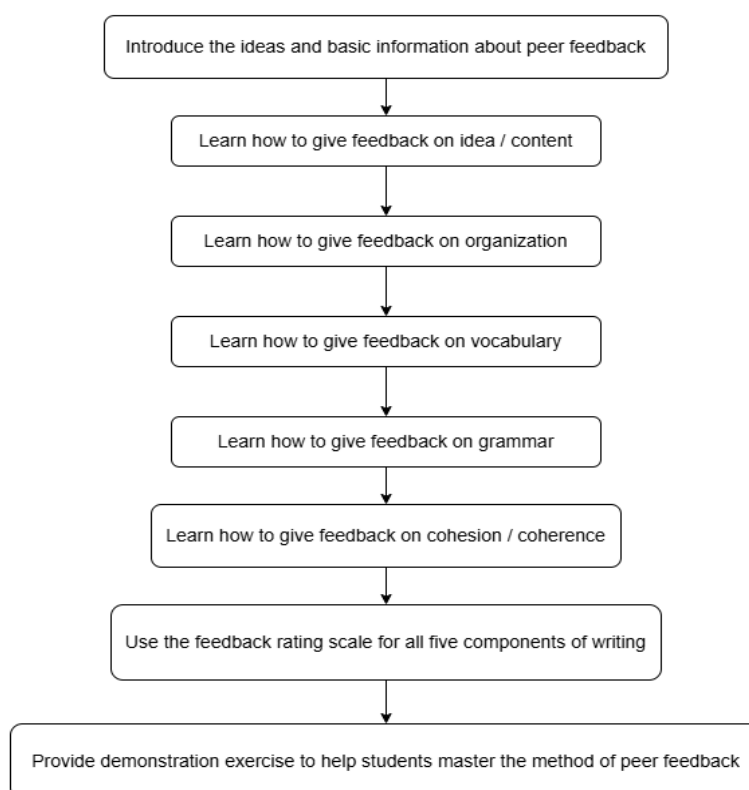


Figure 3.1 : Feedback Training Process

In this study, students were taught to use peer feedback forms to evaluate all aspects of English writing (i.e. idea / content, organization, vocabulary, grammar, and cohesion/coherence). The study feedback evaluation form is based on Zhu's peer feedback in the teaching of English writing in senior high schools in the design of the feedback table (Zhu, 2013).

Before the experiment began, it was essential to familiarize students with the concept and benefits of peer feedback, as Chinese high school students generally have limited experience with this approach. To ensure consistency in instruction, the same teacher was responsible for teaching all three classes and conducting the peer feedback training for the experimental groups. As shown in Figure 3.1 above, the 1st session was to introduce the ideas and information about peer feedback to the students. Before the experiment begins, it was vital to familiarise the students with the idea of peer feedback and its benefits because Chinese high school students are not familiar with it. As peer feedback was done through peer review of each other's composition, group members engaged in cooperation, mutual learning, and common progress of a composition revision (Tsui & Ng, 2000; Zhao, 2010). Through peer feedback, students could not only point out the shortcomings of each other's articles, reflect on whether they have made similar mistakes, and enhance reader awareness, but also learn from each other's wonderful, as well as broaden their own writing ideas (Evans & Lee, 2019). Students could participate in writing activities more actively after they are familiar with the relevant concepts (Yu et al., 2020).

The 2nd, 3rd, 4th, 5th, and 6th sessions were done specifically to familiarize the students on each of the components of writing that they are required to give and receive feedback on, which are the aspects of idea / content, organization, vocabulary, grammar, and cohesion / coherence. In the 2nd session the learners were taught how to give feedback on idea / content. The content is the soul of an article, in which the students should evaluate the specific content of the peer composition are: (1) whether the content of the composition is in line with the main idea, whether the number of words is in line with the requirements; (2) whether the content is substantial, whether the argument can be fully supported; (3) whether the writing center is prominent, whether the main points are complete, whether the paragraphs have topic sentences. The first point is the main idea of the content of the students to write the most basic requirements, but also through such a clear request to make students pay attention to the writing task (which is the college entrance examination English composition), and to prevent deviation. College entrance examination English composition of the number of words required is about 200-250 words, if the number of words less than 200 or more than 250 will be appropriate to reduce points, so this is what students need to pay attention to when writing. The content of the second and third points is full, the content of the center is prominent, the content of the whole point is more demanding to the students in the content. Students were required to write not only the content related to the requirements, but also the content points clear and orderly, so as to fully meet the writing requirements of students in the content. Once students understood what they need feedback on, they skim the writing to determine if its idea / content meets the appropriate requirements in the

peer feedback form.

In the 3rd session the learners were taught how to give feedback on organization. Students were taught to understand that feedback on the organization of the composition specifically refers to (1) whether the organization of the composition is reasonable, (2) whether the writing ideas are clear; and (3) whether the organization of sentences and paragraphs is reasonable. These require students to organize the essay in a reasonable way, divide it into sections, and try not to have a large section that covers all the main points of the content, so that the examiner could clearly catch the key points of the content at a glance, at the same time from the visual comfortable feeling. Once students understood the points that require feedback, they skim through the writing and determine if its organization meets the appropriate requirements on the peer feedback form.

In the 4th session the learners were taught how to give feedback on vocabulary. Students should understand that the feedback on the vocabulary of the composition refers to (1) whether the words are spelled correctly; (2) whether the vocabulary used is rich; (3) whether the words are accurate and appropriate when used individually or in collocations. Once students understand the points that require feedback, they skim through the writing and determine if its vocabulary meets the appropriate requirements on the peer feedback form. If errors are found, they could be highlighted with a horizontal line, filling in the feedback form with appropriate amendments.

In the 5th session the learners were taught how to give feedback on grammar. Students should understand that the feedback on the grammar of the composition specifically refers to (1) whether the grammar uses different sentence forms, not just simple sentences; (2) whether the grammar is used correctly; (3) whether it is possible to combine simple and complex sentences. Once students understood the points that require feedback, they skim through the writing and determine if its grammar meets the appropriate requirements on the peer feedback form. If errors are found, they could be highlighted with a horizontal line, filling in the feedback form with appropriate amendments.

In the 6th session the learners were taught how to give feedback on cohesion / coherence. Students should understand that the feedback on cohesion / coherence of the composition specifically refers to (1) whether the sentences are coherent and cohesive; (2) whether the paragraphs are coherent and cohesive; (3) whether the passages are coherent and cohesive. Once students understand the points that require feedback, they skim through the writing and determine if its cohesion / coherence meets the appropriate requirements on the peer feedback form. If errors are found, they could be highlighted with a horizontal line, filling in the feedback form with appropriate amendments.

Meanwhile, in the 7th session the learners were taught how to use the peer feedback rating scale. As peer evaluation has not been used in previous writing classes, it would be difficult for them to be familiar with it. Therefore,

the teacher should introduce the peer feedback rating scale to the students (see Appendix D) and explain its usage in detail. The table is based on the research findings of Zhu (2013) and the English writing proficiency of the subjects, and the advice of two experienced teachers. The scale consists of five parts: idea / content, grammar, vocabulary, organization, and coherent / coherence. The teacher needs to explain to the students carefully and patiently what to pay attention to in each part. The teacher told the students to draw the lines where the feedback is needed and write down the corresponding changes in the feedback form. The introduction of the evaluation scale was hoped to improve the pertinence of feedback, so that students can have evidence to rely on when giving feedback and avoid the situation of being unable to start. In addition, the feedback scale can also guide students to pay attention to the content and coherence of the passage in addition to grammar and vocabulary.

In the 8th session the researcher gave students a composition demonstration exercise to help them master the method of peer feedback. In this session, the teacher randomly selected an essay as an example, and distributed the copy of the essay and the peer feedback scale to each student. The teacher first gives the student 20 minutes to carry on the group discussion, and according to the feedback scale five items write down the corresponding feedback content. Teachers then gave presentations and presented them in slides. Lastly, the teachers summarized some students' common mistakes and ways of revision, and encouraged students to look for the good points in the companion's articles. Refer to Appendix D for specific peer feedback

evaluation forms. The students of the two experimental classes can practice during the peer feedback training according to the peer feedback form.

In the experimental class, students were stratified into high-, intermediate-, and low-level groups based on their pre-test writing scores (Qin, 2003). Specifically, the top 25% (scores ≥ 20) were designated as the high-level group, the bottom 25% (scores ≤ 15) as the low-level group, and the remaining 50% as intermediate. To optimize peer interaction dynamics, heterogeneous groups of four students were formed, each comprising one high-level, two intermediate-level, and one low-level student (Liu, 2013). Crucially, this grouping intentionally positioned high-level students as primary feedback providers, while low- and intermediate-level students were systematically paired as both providers and receivers to examine cross-ability interactions. During writing tasks, students completed first drafts within a time limit, which were then collected by the teacher. High-level students provided feedback to intermediate-level peers, intermediate-level students reciprocated feedback to both high- and low-level peers, low-level students received scaffolded guidance from intermediates while also practicing feedback delivery to intermediates. The teacher monitored discussions, resolved ambiguities using the feedback form criteria (ideas/content, organization, vocabulary, grammar, cohesion/coherence), and ensured disciplinary adherence. After receiving annotated drafts, students revised their work using colored pens (non-black) to distinguish peer suggestions from original content. This design intentionally created asymmetric feedback roles: high-achievers predominantly acted as “experts”, intermediates as

“mediators”, and low-achievers as “apprentices”. Such stratification allowed analysis of how hierarchical positioning influenced both feedback quality (as providers) and writing improvement (as receivers).

3.6.3 Questionnaire

Two questionnaires were used in this study. At the end of the treatment, EG1 and EG2 administered the post-course questionnaire to determine what factors influence peer feedback on Chinese high school students’ writing performance. All participants in EG1 and EG2 were invited to answer a questionnaire based on a 5-point Likert scale (from item 1 to item 22) after the treatment. The questionnaire adopted the Peer Feedback Orientation Scale (Kasch, Van Rosmalen, Henderikx, & Kalz, 2022). The questionnaire was divided into the following dimensions: accountability, communicativeness, utility, self-efficacy, and receptivity (Appendix E). Table 3.3 shows the dimensions of the influencing factors.

Table 3.3 : Dimensions of Influencing Factors

Dimensions of Questionnaire	Item	Number
Accountability	1-5	5
Communicativeness	6-10	5
Utility	11-13	3
Self-Efficacy	14-18	5
Receptivity	19-22	4

Another questionnaire was to investigate the students’ perception of peer feedback and its effectiveness after two months of experiment, which was expressed in content, organization, vocabulary, grammar, and coherence. The questionnaire is based on a questionnaire designed by Tusi and Ng

(2000) and Shao (2010). Because this study does not involve comments and student ratings, and combined with the specific situation of this study, so made some modifications.

The questionnaire was divided into two parts. The first part includes the participants' personal information, including age, gender, grade, English achievement, and the biggest obstacles in English writing. This part will be done before the pre-test to help the researchers better understand the true writing level of the subjects. The second part is the main body of the questionnaire, which contains 30 questions. It is divided into two parts: attitudes toward peer feedback (whether reading peer-to-peer writing is interesting, and whether reading peer-to-peer writing is useful to oneself) and perception of peer feedback writing performance after the experiment (i.e., idea/content, organization, vocabulary, grammar, and cohesion / coherence).

Table 3.4 : Dimensions of Students' Perception

Dimensions of Questionnaire		Item	Number
Attitudes toward peer feedback	Interest in reading peer composition	1-7	7
	The usefulness of reading companion compositions	8-13	6
Perception of peer feedback	idea/content	14-17	4
	organization	18-20	3
	vocabulary	21-23	3
	grammar	24-26	3
	cohesion / coherence	27-30	4

The following is shown in Table 3.4 and the questionnaire used the Likert five-point scale (A=Completely Disagree; B=Disagree; C=Neutral; D=Agree; E=Strongly Agree) (Appendix F). The researcher asked the students to

complete the questionnaire within 30 minutes after the experiment was completed. Before giving out the questionnaire, the researcher explained to the students that the purpose of the survey was to collect the students' real opinions on the peer feedback added to the English writing class during the experiment period. The questionnaire survey was conducted anonymously and students are asked to fill in the form truthfully.

3.7 Pilot Study

Prior to the start of the actual study, the researchers conducted a pilot study to determine the reliability and validity of the research instruments, materials and procedures. The pilot study was conducted with the aim of reducing potential treatment errors due to unforeseen problems in the main study.

The pilot study was conducted among 40 first-year high school students from Jixi First Middle School. These students were selected to ensure diversity and to allow random sampling within two intact classes. The purpose of the pilot study was to evaluate the feasibility and reliability of the research instruments and procedures before the main study. During the pilot study, the researchers assessed the feasibility of the study plan, including the clarity of the research instruments, the effectiveness of the peer feedback training, and the overall implementation of the study. Special attention was given to the clarity of the questionnaire items and the appropriateness of the response protocols. Participants were encouraged to provide feedback on any difficulties they encountered in understanding the instruments. To ensure the reliability of the questionnaire, Cronbach's alpha was calculated, yielding a reliability

coefficient of 0.85, indicating a high level of internal consistency. Furthermore, inter-rater reliability for writing assessments was measured using Cohen's Kappa, yielding a reliability score of 0.82, confirming the consistency of the ratings. Based on participant feedback, minor revisions were made to the wording of some questionnaire items to enhance clarity for the instrument to be used in the actual study.

As the pilot study focused primarily on instrument testing, the results of the paired samples t-test ($p = 0.000, < 0.05$) are not intended to evaluate the effectiveness of peer feedback but rather to confirm the feasibility of pre- and post-test implementation. The results indicated that the testing procedures were appropriate and that students were able to complete the assessments without difficulty. Since the instruments demonstrated both reliability and feasibility, no major modifications were required before proceeding with the main study. A detailed discussion of the validity and reliability of the research instruments can be found in Section 3.8.

3.8 Validity and Reliability

3.8.1 Validity and Reliability of Peer Feedback Evaluation Form and EFL Writing Performance Grading Criteria and Grading Rubric

To establish the validity of the EFL Writing Performance Grading Criteria and Grading Rubric and the Peer Feedback Evaluation Form, both instruments were reviewed and validated by experts in English writing instruction. For the EFL Writing Performance Grading Criteria and Grading Rubric, a panel of three experts (see Appendix H) in English writing instruction assessed the

descriptors and overall structure to ensure that the criteria accurately reflected key aspects of writing performance. Feedback from the experts led to refinements in certain areas, such as clarifying descriptors like “A lot of grammar and vocabulary are used”. These revisions enhanced the clarity and consistency of the rubric, ensuring its applicability across different raters.

Similarly, the validity of the Peer Feedback Evaluation Form was obtained through expert review by three public high school teachers from Heilongjiang Province, China, whose brief biodata are provided in Appendix H. Both teachers were female and had been recognized as “excellent teachers” in China. With over ten years of experience teaching high school students, they evaluated the structure and content of the form to determine its validity. As a result, the experts confirmed that the form demonstrated structural validity and content validity. They also provided constructive suggestions to improve its effectiveness.

After the content validity evaluation, a pilot test was conducted to assess the reliability of both instruments. The pilot test allowed researchers to examine the clarity and usability of the Peer Feedback Evaluation Form by analyzing how long students used it and identifying any difficulties they encountered. This process helped refine the form by addressing potential obstacles, thereby ensuring a smoother implementation in the main study. Additionally, the pilot test confirmed the feasibility of using the revised EFL Writing Performance Grading Criteria and Grading Rubric, reinforcing its reliability and consistency in assessing student writing performance.

3.8.2 Validity and Reliability of Questionnaires

To evaluate the two questionnaires' construct validity and content validity of the study, the researchers asked three professors from Harbin Normal University in China to take the measurement. All three professors, who hold Ph.D. degrees in TESL, are female. Their brief biodata are provided in Appendix I. These experts measured peer feedback questionnaires to see if their structure and content were valid. At the meeting, three experts discussed each sentence of the peer feedback questionnaire, checking for grammatical errors and anything that needed improvement, and then revising and resubmitting it for validation. Finally, all three professors also agreed that the two questionnaires represent the affective variables being measured, thus the questionnaires have construct and content validity.

The pilot study carried on some students to test out the survey questionnaire to make sure that they are understood by the sample in the study. It helped the researchers determine the exact amount of time high school students spent filling out the questionnaire, whether each part of the questionnaire was designed to fit the actual situation of high school students, and whether each question was clearly stated, in order to make the corresponding changes to improve the accuracy of the real experiment.

3.8.2.1 Reliability and Validity of the Questionnaire on Factors Affecting Peer Feedback

The stability and consistency of the used measuring device over time are referred to as reliability. In other words, reliability means that when the same

measurements are repeated on the same object, there is no difference in the final result. The correlation coefficient is the best representative of the hermeneutic reliability index. At present, Cronbach α reliability coefficient is used most frequently. According to the research of American statisticians, 0.7 is the lowest criterion to judge the reliability coefficient of the scale. When the reliability is barely good, the reliability coefficient should be between 0.6 and 0.7. If the final result is less than 0.6, then it is necessary to re-plan the questionnaire and re-survey. With the help of SPSS Software, the content of the questionnaire was analyzed and the reliability of consistency was judged (Table 3.5).

Table 3.5 : Reliability of the Questionnaire on Factors Affecting Peer Feedback

	Cronbach's Alpha	item
Accountability	.901	5
Communicativeness	.907	5
Utility	.866	3
Self_Efficacy	.884	5
Receptivity	.902	4
overall	.915	22

From the reliability test table of the research variables, it can be seen that the Cronbach's value of each variable is greater than 0.7, which indicates that the reliability of each variable is better. Meanwhile, the reliability value of the total questionnaire is 0.915, which is greater than 0.8. From this, it can be assumed that the measurements of the research variables have a high degree of intrinsic consistency reliability, and that the survey data are relatively reliable.

Validity is a measure of how well a measuring tool fulfils its purpose by determining if it measures the behaviour or quality that it is designed to assess (Anastasi and Urbina, 1997). The relevant and suitable interpretation of the data obtained from the measuring device as a result of the analysis determines the validity. Validity was defined by Whiston (2012) as obtaining data that is suitable for the intended application of the measuring devices. The data samples were tested for their suitability for factor analysis using KMO and Bartlett sample measures to test the validity of the data. KMO and Bartlett spherical significance tests were applied to the research data using SPSS and the results are shown in Table 3.6.

Table 3.6 : Validity of the Questionnaire on Factors Affecting Peer Feedback

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.875
	Approx. Chi-Square	1442.217
Bartlett's Test of Sphericity	df	231
	Sig.	.000

As can be seen from the results of the validity test, the validity test of the data yielded a KMO value of 0.875 which is greater than 0.7; the significance of the statistical value of the Bartlett's sphere test is 0.000, which is less than 0.001 and reaches the level of significance; this indicates that the validity of the data used is better, and it is suitable for the factor analysis.

Following the validity test, exploratory factor analysis (EFA) was conducted to further evaluate the construct validity of the questionnaire (Table 3.7). The table can be referred to in the appendix J. The Total Variance Explained table

revealed that factors with eigenvalues greater than 1 were extracted using the default method of the system, resulting in a total of five extracted factors. The cumulative variance contribution rate of these five factors reached 74.822%, which is significantly higher than the commonly accepted threshold of 30%, indicating that these five factors account for the majority of the variance in the original dataset. Based on these findings, it can be concluded that the five extracted factors provide a strong explanatory framework for the questionnaire, demonstrating its construct validity.

To ensure the maximum extraction of the information of the original scale, as well as the interpretation of the extracted variables, the rotation method was adopted for the analysis, and this study adopted the orthogonal rotation method, and the results are shown in the table 3.8 (Appendix K). In the factor loading matrix, the absolute value of the factor loadings indicates the degree of information overlap between that principal factor and that variable; the higher the information overlap, the greater the ability to explain the principal component generalization. It is required that the loadings of the indicator in the common factor are more than 0.5. The rotated factor loading matrix confirmed that all indicators met this requirement, and the extracted factors were named based on their conceptual relevance.

Given that this study employed a quasi-experimental design, it is essential to address potential threats to internal and external validity and the measures taken to mitigate them. Internal validity refers to the extent to which the observed effects were genuinely caused by the experimental treatment rather

than extraneous variables. Several potential threats to internal validity were considered in this study: First, the history effect was addressed by ensuring that the study was conducted over a relatively short period, minimizing the influence of external events such as curriculum changes or school-wide interventions. Second, the maturation effect, which refers to natural developmental changes in participants over time, was mitigated by selecting students of the same grade level with similar baseline writing proficiency. By maintaining comparable conditions for both the experimental and control groups, the impact of maturation was reduced. Third, the testing effect was controlled by using different but equivalent writing prompts in the pre-test and post-test. This prevented students from merely improving due to repeated exposure to the same test format. Fourth, to address instrumentation effects, standardized EFL Writing Performance Grading Criteria and Grading Rubric were used. To further ensure reliability, all writing samples were assessed by two independent raters. Inter-rater reliability analysis was conducted, yielding a Cronbach's alpha of 0.82, which indicates high reliability. These measures helped enhance the consistency and accuracy of the assessment process.

External validity concerns the generalizability of the study's findings beyond the specific sample and setting. To enhance external validity, several strategies were implemented. First, sample representativeness was ensured by selecting participants from three intact classes in a public high school. This selection reflects a typical English learning environment in China, increasing the applicability of the findings to similar educational contexts. Second, ecological validity was maintained by conducting the peer feedback

intervention in an actual classroom setting rather than a controlled laboratory environment. This approach enhances the practical relevance of the study's results. Lastly, although the study was conducted in a single province, the diversity of participants in terms of their English proficiency levels and learning backgrounds improves the likelihood that the findings can be generalized to broader populations. The combination of these factors strengthens the external validity of the study and supports the applicability of peer feedback in various educational settings. By addressing these validity threats through careful experimental design and methodological considerations, the study provides credible evidence for the effectiveness of peer feedback in improving students' English writing performance.

3.8.2.2 Reliability and Validity of the Questionnaire on Students' Perceptions of Peer Feedback

Reliability refers to the degree of consistency of the results obtained from repeated measurements of the same object using the same method. Reliability indicators are mostly expressed by reliability coefficients, and Cronbach alpha reliability coefficient is the most commonly used reliability coefficient at present. Using SPSS software, the internal consistency of the questionnaire content reliability analysis, using the coefficient value to measure. As shown in Table 3.9.

Table 3.7 : Reliability of the Questionnaire on Students' Perceptions of Peer Feedback

	Cronbach's Alpha	item
interest	.888	7
usefulness	.899	6
idea	.864	4
organization	.924	3
vocabulary	.913	3
grammar	.911	3
cohesion	.897	4
overall	.828	30

From the reliability test table of the research variables, it can be seen that the Cronbach's value of each variable is greater than 0.7, which indicates that the reliability of each variable is better; meanwhile, the reliability value of the total questionnaire is 0.828, which is greater than 0.8. From this, it can be concluded that the measurements of the research variables have a high degree of intrinsic consistency reliability, and that the survey data are relatively reliable.

Table 3.8 : Validity of the Questionnaire on Students' Perceptions of Peer Feedback

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.745
	Approx. Chi-Square	1996.831
Bartlett's Test of Sphericity	df	435
	Sig.	.000

As can be seen from the results of the validity test, the validity test of the data yielded a KMO value of 0.745 which is greater than 0.7; the significance of the statistical value of the Bartlett's sphere test is 0.000, which is less than 0.001 and reaches the level of significance; this indicates that the validity of

the data used is better, and it is suitable for the factor analysis.

Following the validity test, exploratory factor analysis (EFA) was conducted to further evaluate the construct validity of the questionnaire (Table 3.11). The table can be referred to in the appendix L. The factors with eigenvalues greater than 1 were extracted according to the default method of the system, resulting in the number of extracted factors being 7. The cumulative variance contribution of the first 7 factors reached 74.841%, which is much more than 30% or more. Therefore, the extracted male factors reflect most of the information of the original variables, and it is considered that these 7 factors have a better degree of explanation of the scale.

To ensure the maximum extraction of the information of the original scale, as well as the interpretation of the extracted variables, the method of rotation is adopted for the analysis, and this study adopts the orthogonal rotation method, and the results are shown in Table 3.12 (Appendix M). In the factor loading matrix, the absolute value of the factor loadings indicates the degree of information overlap between that principal factor and that variable; the higher the information overlap, the greater the ability to explain the principal component generalization. It is required that the loadings of the indicator in the common factor are more than 0.5. The above table is the rotated factor loading matrix, the indicators meet the requirements, the indicators can be categorized into 7 types of factors, and according to professional knowledge were named as in the above table.

3.9 Data Collection

After testing the validity and reliability of the research tool, the researchers select the appropriate sample. The study was conducted at a high school in Heilongjiang, China. The data collection started by obtaining permission from the relevant authorities in the said school. An informal school visit followed and three classes were identified to participate in the experiment.

The research included three classes, one control class and two experimental classes. Before the experiment, students' writing scores were collected from three classes, and the average scores of each class were calculated with SPSS. After two months of experiment, the writing scores of one control class and two experimental classes were collected, and the average scores of each class were calculated with SPSS 23. Two experimental classes were given questionnaires and analyzed by SPSS 23. The specific experimental procedure is shown in Figure 3.2.

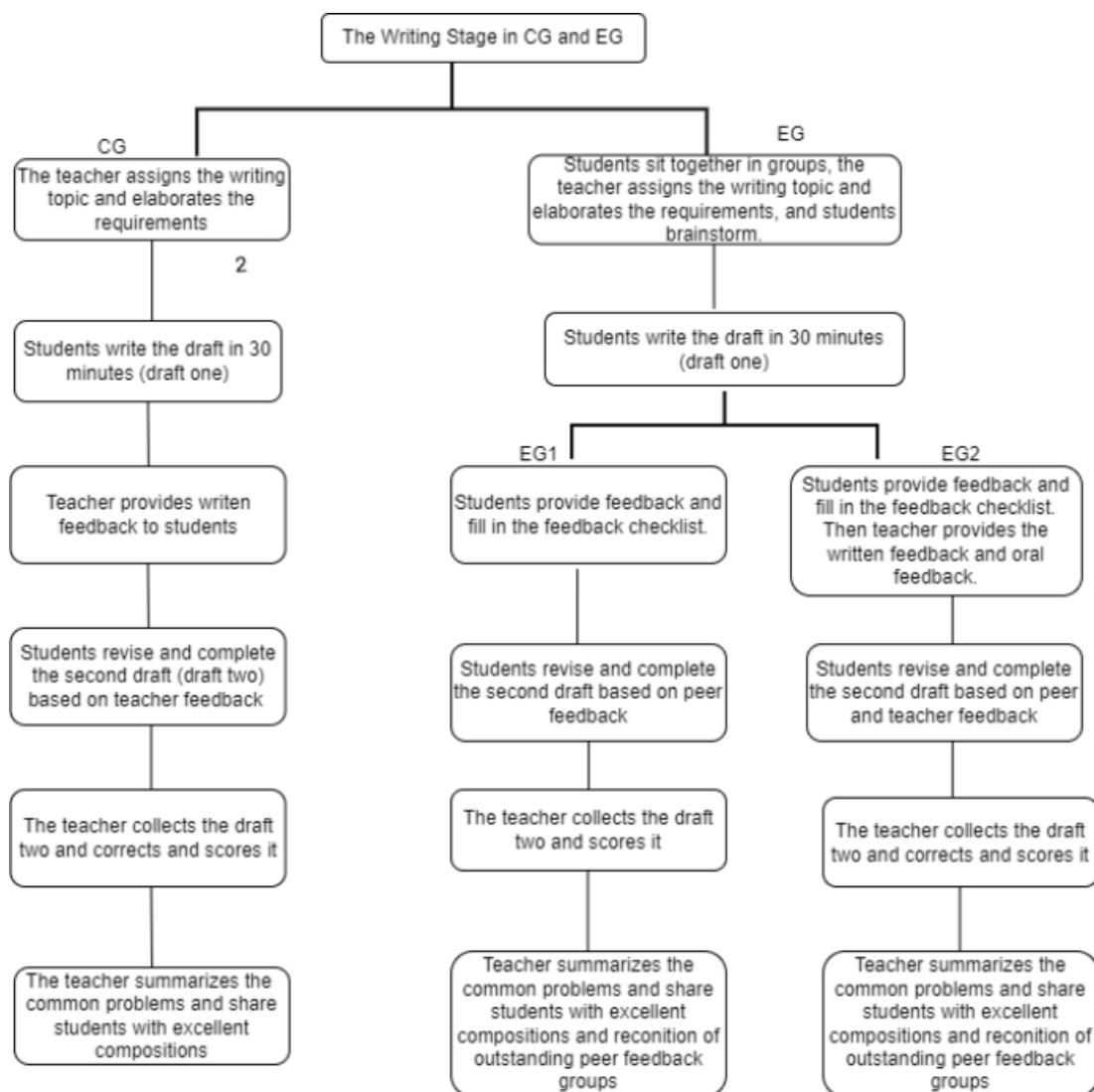


Figure 3.2 : Experimental Procedure

According to Figure 3.2, the specific flow of the control class was that after the teacher gave the writing topic, the students were first given 5 minutes to think about and discuss the topic of the essay, some vocabulary expressions and sentence structures that may be used, and then the teacher spent about 10 minutes with the students on the topic of the essay, including tense, person, style, outlining, including a list of available expressions and the general framework of the essay, etc. The teacher helped the students to organize the structure of the essay and to enrich the vocabulary and sentence structures

as much as possible. Students then spent the remaining 30 minutes or so in class writing based on their existing preparation, completing their first drafts and submitting them to the teacher. It took about 4 days to complete the first draft because of the number of questions students have, and after 4 days, the students' drafts were sent back to them in class, and the teacher explained to them the common problems in their drafts to help them understand how to revise them. At the end of the lecture, 20 minutes were set aside for students to revise their drafts according to the teacher's comments and explanations.

After class, the teacher collected the students' second drafts for further revision. Two days later, the second drafts were sent back to the students for further revision based on the teacher's comments. At the same time, the teacher summarized the students' overall writing situation and summarize their mistakes. The excellent essays were shown to students for their appreciation. The revised essays were then the finalized essays, after which they were all collected and handed over to the researcher.

The two experimental classes were divided into high (12 students), medium (26 students) and low (12 students) levels according to the pre-test composition scores before class according to the method of determining the high and low groupings mentioned by Qin (2003) in *Quantitative Data Analysis in Research on Foreign Language Teaching and Learning*, i.e., choosing the first 25% and the second 25% of the total number of students as the criteria for high and low groupings, and the rest as the medium groupings. The students were grouped at the same time. For the convenience of

communication, a group of four students at the front and back desks was used, with twelve groups in total, each of which consisted of one high level, two medium level, and one low level student, and the remaining two medium level students were arranged in the last two groups. The student with the highest level of performance was appointed as the group leader, who was responsible for supervising the orderly development of feedback from the group members as well as providing assistance to the group members.

In experimental group 1 and experimental group 2, students were given a topic to write about for 5 minutes, and then the teacher guided them through the same process of analyzing and outlining the topic as in the control class. Students were then given 30 minutes to work on their first drafts, which were collected at the end of the class. The difference is that in experimental group 1, the teacher sent the first drafts to the students who have been divided into groups, and through group work, the group members' writing was peer assessed according to the five items on the Peer Feedback Assessment Sheet (idea / content, organization, grammar, vocabulary, and coherence / coherent) for a period of twenty minutes. During the peer feedback process, the group leaders of each group should played a full role in helping students who have questions and give them timely guidance. Then the teacher sent the students' first drafts back to the students, who revised them according to the suggestions given by their peers, and the revised essays are taken as finalized essays. At the same time, the teacher summarized the overall writing of the students and summarizes their mistakes. The excellent essays were also shown to the students for their appreciation, and the peer feedback

group for recognizing excellence.

In the experimental group 2, after the students finished their first drafts, they followed the process of peer feedback critique as they had previously done in the peer feedback training in the classroom. The teacher ensured that each group of students was observed, on the one hand, to urge some students who were not active or less serious about the feedback activity to commit themselves to it. On the other hand, the teacher gave timely and appropriate guidance to some problems that arose in the process of students' feedback, such as those that could not be solved or were still unclear to the students after they exchanged and discussed the problems with each other. After the students' peer feedback, students were instructed to make revisions according to their peers' feedback, where they do not know how to make revisions, they could also ask their classmates or the teacher who made the revisions, so that they could make revisions more accurately and in a timely manner. After the peer assessment, students could revise according to the feedback suggestions and complete the second draft. Finally, the second draft was submitted to the teacher, who evaluates the students' second draft in five aspects: idea / content, organization, vocabulary, grammar and coherence / coherent. Feedback was returned to students, who completed their final drafts based on the teacher's suggestions. Finally, the teacher evaluated all students' writing as a whole, summarized the mistakes, and presented the best essays. At the same time, the excellent evaluations were presented so that students could learn from them and give better feedback to their peers in future feedback sessions.

At the end of the experiment, a questionnaire on the influence of peer feedback on high school students' English writing performance and a questionnaire on students' perception of peer feedback were given to the students of experimental group 1 and experimental group 2 to investigate what factors can influence peer feedback on writing performance and the changes in the experimental groups' interest in and perception of peer feedback. At the same time, a writing post-test was administered to the students in the three classes to find out their overall writing performance and the changes in idea / content, organization, vocabulary, grammar and coherence / coherent.

3.10 Ethical Considerations

Given the potential issues related to ethics in the current study, the researcher first presented the proposal to her supervisory committee for permission. After receiving approval letters (No.JKEUPM-2023-456) from Universiti Putra Malaysia's Ethics Committee Board (see Appendix I) and the Institute's Ethical Review Committee (see Appendix H), the researcher proceeded ahead and collected the data. Furthermore, all participants' secrecy was secured by pseudonyms, making it impossible to identify their sources. In addition, the researchers did not anticipate any scenarios under which volunteers may be removed from the study. However, if there were any conditions under which a participant may not profit from the study, or by participating in the study a participant might not be able to devote time to his / her own high school studies, the student was always entitled to withdraw from the study.

3.11 Data Analysis

The data for this investigation were analysed using SPSS 23. First, the researcher utilised descriptive statistics and an independent samples t-test to determine whether there were any variations in writing skill between the two experimental and control students prior to the experiment. After a two-month trial, the researcher also utilised descriptive statistics and an independent-samples t-test to see whether there were any appreciable changes in the three classes' writing skills based on the feedback they received. Additionally, the researcher employed the paired samples t-test to compare the changes in writing skill (i.e., content, organization, grammar, vocabulary, and coherence) between the pre- and post-experimental learners in order to assess the two-tailed significance value. The researcher also applied the paired samples t-test to examine differences in writing proficiency (i.e., content, organization, grammar, vocabulary and coherence) between the pre- and post-experimental control groups of learners. Additionally, in the survey questionnaires, the descriptive statistics mean values of SPSS were primarily employed to analyse the impact of feedback from peers on the perception of the student's assignment.

For Research Question 2, one-way ANOVA and ANCOVA were used to compare the writing performance outcomes across multiple treatment groups (i.e., teacher feedback, peer feedback, and TF+PF) and to control for any pre-existing differences between groups in the post-test results. Additionally, regression analysis was conducted to examine the relationships between various factors influencing peer feedback effectiveness and writing

performance.

For Research Question 3, mean analysis, frequency analysis, and comparative analysis were used to assess students' perceptions of peer feedback and their effectiveness in improving writing skills. Additionally, in the survey questionnaires, the descriptive statistics mean values of SPSS were primarily employed to analyse the impact of feedback from peers on the perception of the student's assignment.

3.12 Summary

This chapter discussed the methodology adopted in this study. It included the research design, the population and sample, research instruments and the validity and reliability of these instruments. Next, data collection and analysis methods were explained. The following chapter will explain the findings obtained from the data analysis.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

The purpose of this study was to examine the effect of peer feedback on students' English writing performance by comparing three different feedback methods (i.e., teacher feedback in the control group (CG), peer feedback in the experimental group (EG1), and a combination of teacher and peer feedback in the experimental group (EG2)) to examine students' perception of using peer feedback (i.e., their attitudes toward peer feedback and their performance in peer feedback composing) after the experiment. This chapter presents the results and findings of the study in which all the quantitative data sets collected from the research instruments (i.e., the mean for English writing scores of the three classes on the pre-test and post-test as well as the mean scores of the five items, the scores of the three classes based on the English writing performance scoring rubrics and rating scales, and the questionnaires administered after the experiment) are reported in detail, and a comprehensive discussion is provided on the basis of the results and findings.

To begin with, demographic information on participants in the quasi-experimental study is reported. According to research question 1 (What are the impacts of peer feedback on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence)?) the differences in the comparative mean scores

of students' total writing scores and each of the scores (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence) on pre-tests and post-tests in the three treatment groups (EG1, EG2, and CG) in the quasi-experiment are reported in terms of descriptive and inferential statistics.

In addition, according to research question 2 (i.e., What are the factors contributing to the effectiveness of peer feedback impact on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence)?) the researcher used Peer-Feedback Orientation Scale (PFOS) to explore what factors influence high school students' performance in English writing. Lastly, in regard to research question 3 (i.e., What are Chinese EFL high school students' perceptions of peer feedback on their English writing?) the researcher analyzed participants perception of peer feedback (as reflected by descriptive statistics of EG1 and EG2 participants' responses to the questionnaire). In addition, addressing the research questions and hypotheses, all findings are explained accordingly in the discussion section. Finally, all results are summarized and the next chapter is briefly presented.

4.2 Demographic Information

Tables 4.1 and 4.2 illustrate the distribution and characteristics of the samples in the treatment groups in the quasi-experiment in terms of gender and age. The sample for this study consisted of 150 sophomores in three intact classes of equal size in a Chinese high school. The data show that each class is equally divided between male and female students, which is representative of

the typical gender distribution in most Chinese high schools when classes are divided prior to enrollment in the first year of high school. Majority of students were around 17 years old.

Table 4.1 : Backgrounds of Participants according to Group and Gender

Group	Male	Female	Total
CG	23	27	50
EG1	24	26	50
EG2	25	25	50
Total	72	78	150

Table 4.2 : Frequency Distribution of Respondents' Age

Age	CG	EG1	EG2	Total
16	9	8	7	24
17	39	42	40	121
18	2	0	3	5
Total	50	50	50	150

4.3 Exploratory Data Analysis

In this study, an Exploratory Data Analysis (EDA) section was added to assess the reliability of the data and evaluate key assumptions underlying the statistical analysis. EDA is crucial for understanding the structure of the data and identifying potential issues before performing formal hypothesis testing. The following tests were conducted to examine the distribution of the data, including normality and homogeneity of variance.

4.3.1 Normality

To assess the normality of the data, skewness (SK) and kurtosis (K) values were calculated for the pre-test and post-test scores across the three groups

(CG, EG1, and EG2) for each writing component (idea/content, organization, vocabulary, grammar, and cohesion). The results of the skewness and kurtosis tests are presented in Table 4.3, which shows the skewness and kurtosis values for each variable in both the pre-test and post-test stages.

As shown in Table 4.3, the skewness and kurtosis values for the pre-test and post-test data generally fall within acceptable ranges. For example, most skewness values are close to 0, indicating a roughly symmetric distribution, while the kurtosis values are near 0 or slightly negative, suggesting distributions that are relatively close to normal. This supports the assumption that the data is approximately normally distributed, which is important for conducting parametric tests such as t-tests and ANOVA.

Table 4.3 : Skewness and Kurtosis Values for Pre-test and Post-test across Different Groups (CG, EG1, EG2)

		CG		EG1		EG2	
		SK	K	SK	K	SK	K
Pre-test	idea	-0.034	-0.467	-0.151	-0.737	-0.161	-0.481
	organization	-0.148	-0.636	-0.182	-0.758	0.075	-0.638
	vocabulary	-0.167	-0.519	0.155	-0.479	-0.177	0.107
	grammar	0.04	-0.828	-0.077	-1.018	0.081	-0.512
	cohesion	0.121	-0.566	0.245	-0.472	-0.07	-0.514
Post-test	idea	0.108	-0.786	-0.03	-0.361	-0.208	-0.696
	organization	-0.115	-0.437	-0.081	-0.405	0.037	-1.054
	vocabulary	-0.151	-0.555	-0.455	0.067	-0.805	-0.152
	grammar	0.079	-0.325	-0.252	-0.772	-0.549	-0.421
	cohesion	-0.441	-0.344	-0.245	-0.394	-0.667	-0.789

The skewness and kurtosis values indicate that the data for all three groups (CG, EG1, and EG2) generally follows a normal distribution, which satisfies the assumptions of normality required for further statistical tests such as ANOVA.

4.3.2 Homogeneity of Variance Test

In addition to testing for normality, homogeneity of variance was assessed to determine whether the variances across the three groups (CG, EG1, and EG2) were equal, as this assumption is crucial for conducting parametric tests such as ANOVA. Levene's test of homogeneity of variances was applied to the pre-test and post-test data for each writing component (idea/content, organization, vocabulary, grammar, and cohesion).

The results of the Levene's test for homogeneity of variance are presented in Table 4.2. A non-significant result ($p > 0.05$) indicates that the variances across the groups are equal, which is a necessary assumption for performing an ANOVA. For the majority of the writing components, the Levene's test returned non-significant p-values, suggesting that the assumption of homogeneity of variance was met. However, for the grammar post-test, the p-value was 0.056, which is marginally above the 0.05 threshold but still close enough to suggest that the assumption of homogeneity may hold.

Table 4.4 : Levene's Test of Homogeneity of Variances for Pre-test and Post-test across Different Groups (CG, EG1, EG2)

	Levene Statistic	df1	df2	Sig.
Idea pre-test	.188	2	147	.829
Organization pre-test	.384	2	147	.682
Vocabulary pre-test	.860	2	147	.425
Grammar pre-test	.829	2	147	.438
Cohesion pre-test	.010	2	147	.990
Idea post-test	1.339	2	147	.265
Organization post-test	.389	2	147	.679
Vocabulary post-test	.915	2	147	.403
Grammar post-test	2.946	2	147	.056
Cohesion post-test	.300	2	147	.741

In general, the results of the Levene's test indicate that the assumption of homogeneity of variance holds for most components in both the pre-test and post-test data. These results suggest that ANOVA is an appropriate statistical method to use for comparing the writing performance of the three groups.

4.4 Findings of Research Questions

4.4.1 Research Question 1: What Are the Impacts of Peer Feedback on Chinese EFL High School Students' Writing Performance (i.e., Idea / Content, Organization, Vocabulary, Grammar, and Cohesion / Coherence)

All the participants' writing tests collected in pre- and post-tests were assessed based on the writing performance grading criteria and grading rubric, which is also the Chinese college entrance examination scoring system. From the high inter-rater reliability obtained in the pilot study, the paired-sample t-test values for both the control and experimental classes after the treatment were 0.000, which is less than the significance level of 0.05, and it can be assumed that peer feedback was effective on students' writing performance. Therefore, students' holistic writing scores and five sub-items writing scores were used for analyzing the change of students' writing performance in current study.

As mentioned before, the first research question of current study is to explore the impact of peer feedback on Chinese EFL high school students' writing performance (i.e., RQ1: What are the impacts of peer feedback on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence)?) Therefore,

in the following section, the relevant data sets will be interpreted using descriptive statistics and statistical tests, including One-Way ANOVA and Independent Samples t-test where appropriate.

4.4.1.1 Comparative Analysis of the Three Classes in the Pre-test

Before conducting the experiment, it was necessary to verify whether the three groups (Control Group: CG, Experimental Group 1: EG1, and Experimental Group 2: EG2) had comparable writing proficiency. This ensures that any differences observed after the experiment are attributable to the intervention rather than pre-existing disparities in writing ability. To assess the homogeneity of the three groups, a One-Way ANOVA was conducted to compare the overall writing scores as well as the five subcomponents (idea/content, organization, vocabulary, grammar, and cohesion/coherence) across CG, EG1, and EG2. The mean, standard deviation, F-statistic, and significance (p-value) for each writing component are presented in Table 4.3.

Table 4.5 : One-Way ANOVA for Pre-Test Writing Scores across Three Groups

Writing Component	Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval	Min	Max	F	Sig.
Overall Writing Score	CG	50	15.040	2.539	0.359	[14.319, 15.761]	10	20	0.018	0.982
	EG1	50	15.000	2.935	0.415	[14.164, 15.836]	9	21		
	EG2	50	15.020	2.661	0.376	[14.263, 15.777]	10	20		
Idea / Content	CG	50	3.060	1.132	0.160	[2.737, 3.383]	1	5	0.012	0.988
	EG1	50	3.040	1.212	0.171	[2.695, 3.385]	1	5		
	EG2	50	3.080	1.158	0.164	[2.750, 3.410]	1	5		
Organization	CG	50	3.020	1.059	0.150	[2.719, 3.321]	1	5	0.031	0.969
	EG1	50	3.060	1.252	0.177	[2.704, 3.416]	1	5		
	EG2	50	3.000	1.195	0.169	[2.662, 3.338]	1	5		
Vocabulary	CG	50	3.040	1.142	0.161	[2.716, 3.364]	1	5	0.052	0.949
	EG1	50	2.980	1.040	0.147	[2.683, 3.277]	1	5		
	EG2	50	3.020	0.979	0.139	[2.741, 3.299]	1	5		
Grammar	CG	50	2.980	1.204	0.170	[2.636, 3.324]	1	5	0.061	0.941
	EG1	50	3.040	1.309	0.185	[2.668, 3.412]	1	5		
	EG2	50	2.960	1.160	0.164	[2.631, 3.289]	1	5		
Cohesion / Coherence	CG	50	2.940	1.168	0.165	[2.607, 3.273]	1	5	0.042	0.959
	EG1	50	2.880	1.118	0.158	[2.563, 3.197]	1	5		
	EG2	50	2.960	1.195	0.169	[2.622, 3.298]	1	5		

The results showed that the mean scores for overall writing ability were nearly identical among CG (15.040), EG1 (15.000), and EG2 (15.020). The

F-statistic (0.018) and p-value (0.982) indicated no statistically significant difference among the groups. Similarly, for all five subcomponents, the mean scores were closely aligned across the groups, and the F-statistics were very low, with p-values far exceeding the significance threshold of 0.05. This confirms that there were no significant differences in any aspect of writing ability before the experiment. Since the p-values for all components were above 0.05, the results establish that the three groups were homogeneous in terms of writing performance. This ensures that any differences observed after the intervention can be attributed to the experimental treatment rather than pre-existing disparities, thereby confirming the reliability of the quasi-experimental design.

4.4.1.2 Comparative Analysis of the Three Intact Classes in the Post-test

In the pre-test, the mean scores of each group were close to each other. Then, students in two experimental groups (EG1 and EG2) were given 8 sessions of peer feedback training and presentation based on Zhu's (2013) peer feedback approach in the teaching of English writing in senior high schools in the design of the feedback table (Zhu, 2013) before the experiment. After two-months experiment, a post-test is used to test whether the writing ability of the three treatment groups is affected by the different feedback methods. The nature of students' holistic writing scores and item scores gathered in post-test were showed in Tables 4.6, 4.7 and 4.8, respectively.

Table 4.6 : Independent Samples T-test of CG and EG1 Students' Scores in Posttest

	group	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Post-writing	EG1	50	16.9000	2.20621	3.500	.001
Performance	CG	50	15.3200	2.30740		
Post-idea	EG1	50	3.2400	1.02140	.746	.458
	CG	50	3.0800	1.12195		
Post-organization	EG1	50	3.2600	1.02639	.741	.460
	CG	50	3.1000	1.12938		
Post-vocabulary	EG1	50	3.6200	1.02798	2.348	.021
	CG	50	3.1200	1.09991		
Post-grammar	EG1	50	3.2400	1.17038	1.002	.319
	CG	50	3.0200	1.02000		
Post-cohesion	EG1	50	3.5400	.99406	2.641	.010
	CG	50	3.0000	1.04978		

According to Table 4.6, the results of the independent samples t-test for the comparison of the post-test scores of the control group (CG-teacher feedback) and the experimental group 1 (EG1-peer feedback) show that the t-distribution value for the post-test of the total score of writing performance is 3.50, with a significance value of 0.001, which is less than 0.05, indicating a significant difference between the CG and EG1 group post-test writing performance total scores. The mean score of EG1 (16.90) was significantly higher than that of CG (15.32), demonstrating that peer feedback had a positive effect on overall writing performance.

In terms of individual dimensions, the t-tests show no significant difference in idea/content ($p = 0.458$), organization ($p = 0.460$), and grammar ($p = 0.319$) between the CG and EG1 groups. This suggests that both groups performed similarly in terms of idea/content, organization, and grammar. However, significant differences were found in vocabulary ($p = 0.021$) and cohesion/coherence ($p = 0.010$), where EG1 outperformed CG. Specifically,

the mean score of EG1 for vocabulary (3.62) and cohesion/coherence (3.54) was significantly higher than that of CG (3.12 for vocabulary and 3.00 for cohesion/coherence). Most importantly, in terms of overall writing performance, EG1 showed a significant advantage over CG with a p-value of 0.001. These findings suggest that peer feedback has a significant positive effect on students' writing performance, particularly in vocabulary and cohesion/coherence.

It is worth noting that Levene's test for the equality of variances shows no significant differences in variances between the two groups across all dimensions, with p-values ranging from 0.27 to 0.38, indicating that the assumption of homogeneity of variances was not violated.

Table 4.7 : Independent Samples T-test of CG and EG2 Students' Scores in Post-test

	group	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Post-writing performance	CG	50	15.3200	2.30740	-9.410	.000
	EG2	50	19.7400	2.38883		
Post-idea	CG	50	3.0800	1.12195	-3.680	.000
	EG2	50	3.8200	.87342		
Post-organization	CG	50	3.1000	1.12938	-3.456	.001
	EG2	50	3.8000	.88063		
Post-vocabulary	CG	50	3.1200	1.09991	-5.067	.000
	EG2	50	4.1400	.90373		
Post-grammar	CG	50	3.0200	1.02000	-4.753	.000
	EG2	50	3.9400	.91272		
Post-cohesion	CG	50	3.0000	1.04978	-5.002	.000
	EG2	50	4.0400	1.02936		

According to Table 4.7, when comparing the writing performance of control group (CG-teacher feedback) and experimental group 2 (EG2-teacher and peer feedback), six main areas were focused on, including idea / content,

organization, vocabulary, grammar, cohesion / coherence, and overall writing performance. First, there has been a significant difference between CG and EG2 on the three dimensions of vocabulary and cohesion / coherence. The mean score in vocabulary of CG in the post-test is 3.120, and the mean score in vocabulary of EG2 is 4.140, which is 1.02 higher than CG. The mean score in cohesion / coherence of CG in the posttest is 3.000, and the mean score in cohesion / coherence of EG2 is 4.040, which is 1.04 higher than CG. In addition, the p-values of vocabulary and cohesion / coherence is 0.000, which indicates a significant difference between CG and EG2 in vocabulary and cohesion. Second, it is interesting to note that the mean scores of the EG2 were significantly higher than those of the CG in terms of idea / content, organization, grammar. The p-values of the t-tests were 0.000, 0.001 and 0.000, respectively, indicating that the EG2 also performed better than the CG in terms of idea / content, organization and grammar. Therefore, students who received teacher and peer feedback improved significantly in sub-items than students who received only teacher feedback.

Most importantly, in terms of overall writing performance, the mean score of the EG2 was significantly higher than that of the CG, with a p-value of 0.000 for the t-test, indicating that the EG2 reached a significant advantage in terms of overall writing performance. This finding imply that the use of teacher feedback and peer feedback has a significant positive effect on the improvement of students' writing performance, especially in sub-items (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence).

Table 4.8 : Independent Samples T-test of EG1 and EG2 Students' Scores in Post-test

	group	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Post-writing performance	EG2	50	19.7400	2.38883	6.176	.000
	EG1	50	16.9000	2.20621		
Post-idea	EG2	50	3.8200	.87342	3.052	.003
	EG1	50	3.2400	1.02140		
Post-organization	EG2	50	3.8000	.88063	2.823	.006
	EG1	50	3.2600	1.02639		
Post-vocabulary	EG2	50	4.1400	.90373	2.686	.008
	EG1	50	3.6200	1.02798		
Post-grammar	EG2	50	3.9400	.91272	3.335	.001
	EG1	50	3.2400	1.17038		
Post-cohesion	EG2	50	4.0400	1.02936	2.471	.015
	EG1	50	3.5400	.99406		

According to Table 4.8, from the categorical mean statistics, the mean score of the total score achievement of writing performance of EG1 class is 16.900 and the mean score of writing performance of EG2 class is 19.740, which is 2.840 higher than EG1. The results of the independent samples t-test for the comparison of the post-test scores of experimental group 1 (EG1-peer feedback) and experimental group2 (EG1-teacher and peer feedback) show that the t-distribution value for the post-test of the total score of writing performance is 6.176, which corresponds to a significance sig value of 0.000, which is less than 0.05, and reaches the level of significance. Therefore, there is a significant difference between the EG1 and EG2 class post-test writing performance total scores. The p values of idea / content, organization, vocabulary, grammar, and cohesion / coherence are 0.003, 0.006, 0.008, 0.001 and 0.015, respectively, which is less than 0.05, which indicates a significant difference in sub-items. So, students who received teacher and peer feedback improved significantly in sub-items (i.e., idea / content,

organization, vocabulary, grammar, and cohesion / coherence) than students who received only peer feedback.

4.4.1.3 Analysis of Writing Performance in Three Intact Classes

In order to investigate whether peer feedback has an effect on high school English writing performance on each element, the researcher compared each sub-item of the students' pre-test and post-test scores in three classes, and the following are the results of the analysis.

Table 4.9 : Paired Sample T-test of Pre-test and Post-test Scores in CG

		Mean	N	Std. Deviation	t	Sig. (2-tailed)
Pair 1	Post-writing performance	15.3200	50	2.30740	.990	.327
	Pre-writing performance	15.0400	50	2.53916		
Pair 2	Post-idea	3.0800	50	1.12195	.163	.871
	Pre-idea	3.0600	50	1.13227		
Pair 3	Post-organization	3.1000	50	1.12938	.586	.561
	Pre-organization	3.0200	50	1.05926		
Pair 4	Post-vocabulary	3.1200	50	1.09991	.586	.561
	Pre-vocabulary	3.0400	50	1.14214		
Pair 5	Post-grammar	3.0200	50	1.02000	.292	.771
	Pre-grammar	2.9800	50	1.20357		
Pair 6	Post-cohesion	3.0000	50	1.04978	.489	.627
	Pre-cohesion	2.9400	50	1.16776		

As can be seen from Table 4.9, in the analysis of differences regarding the English writing scores of control group before and after the experiment, the overall writing score of control group before the experiment is 15.040; while the overall score of control group after the experiment is 15.320, with a difference of about 0.28 points. Through the paired samples t-test, the t-value of the test is 0.990, and the probability of the test is 0.327, which is greater than the significance level of 0.05. Therefore, the null hypothesis should not

be rejected, where it can be considered that the writing performance of the control group before and after the experiment is almost the same, and there is no significant difference.

From the point of view of the students' writing performance indicators, through the paired samples t-test, the probability Sig. value of the test of idea / content, organization, vocabulary, grammar and cohesion / coherence of the control group are 0.871, 0.561, 0.561, 0.771 and 0.627, respectively, which are greater than 0.05. That is to say, before and after the experiment, the performance of control group class students in idea / content, organization, vocabulary, grammar, and cohesion / coherence is similar and there is no significant difference.

Table 4.10 : Paired Sample T-test of Pre-test and Post-test Scores in EG1

		Mean	N	Std. Deviation	t	Sig. (2-tailed)
Pair 1	Post-writing performance	16.9000	50	2.20621	6.743	.000
	Pre-writing performance	15.0000	50	2.93466		
Pair 2	Post-idea	3.2400	50	1.02140	1.871	.067
	Pre-idea	3.0400	50	1.21151		
Pair 3	Post-organization	3.2600	50	1.02639	1.650	.105
	Pre-organization	3.0600	50	1.25210		
Pair 4	Post-vocabulary	3.6200	50	1.02798	4.502	.000
	Pre-vocabulary	2.9800	50	1.03982		
Pair 5	Post-grammar	3.2400	50	1.17038	1.807	.077
	Pre-grammar	3.0400	50	1.30868		
Pair 6	Post-cohesion	3.5400	50	.99406	7.452	.000
	Pre-cohesion	2.8800	50	1.11831		

As shown in Table 4.10, in the analysis of the differences in English writing performance of experimental group 1 before and after the experiment, the overall writing score of experimental group 1 students is 15.000 before the

experiment, while after the experiment it is 16.900, with a difference of about 1.900 points. Through the paired samples t-test can be obtained, the t-value of the test is 6.743, the test corresponds to a probability P value of 0.000, less than the significance level of 0.05. Therefore, the null hypothesis of the test should be rejected, in which it can be considered that there is a significant difference between the English writing scores of the experimental group 1 before and after the experiment, i.e., after using peer feedback the English writing scores of the experimental group 1 students' English writing performance has been significantly improved.

The paired sample t-test is used (see Table 4.10) to discover the changes for experimental group 1 students' scores in idea / content, organization, vocabulary, grammar, and cohesion / coherence in pre-test and post-test. There are positive improvements for EG1 students to improve their writing vocabulary and cohesion / coherence after peer feedback. Two P values are the same as 0.000, which are less than 0.05, so there is positive facilitation for EG1 students' writing vocabulary and cohesion / coherence after the peer feedback. In addition, the EG1 students' writing idea / content, organization and grammar have improved after peer feedback, but the improvements are minor. The probability Sig. value of the test of idea / content, organization and grammar of the EG1 are 0.067, 0.105 and 0.077, respectively, which are greater than 0.05, so the difference is not significant. Based on the above findings, students who received peer feedback improved significantly in sub-items, especially in vocabulary and cohesion / coherence.

Table 4.11 : Paired Sample T-test of Pre-test and Post-test Scores in EG2

		Mean	N	Std. Deviation	t	Sig. (2-tailed)
Pair 1	Post-writing performance	19.7400	50	2.38883	9.998	.000
	Pre-writing performance	15.0200	50	2.66106		
Pair 2	Post-idea	3.8200	50	.87342	4.454	.000
	Pre-idea	3.0800	50	1.15776		
Pair 3	Post-organization	3.8000	50	.88063	4.320	.000
	Pre-organization	3.0000	50	1.19523		
Pair 4	Post-vocabulary	4.1400	50	.90373	6.566	.000
	Pre-vocabulary	3.0200	50	.97917		
Pair 5	Post-grammar	3.9400	50	.91272	6.112	.000
	Pre-grammar	2.9600	50	1.15987		
Pair 6	Post-cohesion	4.0400	50	1.02936	6.228	.000
	Pre-cohesion	2.9600	50	1.19455		

As can be seen from Table 4.11, in the analysis of differences regarding the English writing scores of experimental group 2 before and after the experiment, the overall score of experimental group 2 students in pre-test is 15.020; while in post-test is 19.740, which is a difference of about 4.720 points. Through the paired samples t-test, we can get that the t-value of the test is 9.998, and the probability Sig. value corresponding to the test is 0.000, which is smaller than the significance level of 0.05. Therefore, the null hypothesis of the test should be rejected, in which it can be considered that there is a significant difference in the English writing performance of experimental group 2 before and after the experiment, i.e., the students' English writing achievement after the experiment in Experimental group 2 has been significantly improved.

The paired sample t-test is used (see Table 4.11) to discover the changes for experimental group 2 students' scores in idea / content, organization, vocabulary, grammar, and cohesion / coherence in pre-test and post-test. The

five P values of idea / content, organization, vocabulary, grammar and cohesion / coherence are the same as 0.000, both less than 0.05, so there is positive facilitation for EG2 students' writing idea / content, organization, vocabulary, grammar and cohesion / coherence after the peer feedback. So, students who received teacher and peer feedback improved significantly in these sub-items.

In a nutshell, descriptive statistics and independent samples t-tests on the pre and post-test scores of the three classes revealed that there was no significant difference in the overall writing performance of CG, and that there was a significant improvement in the overall writing performance of EG1 and EG2, with the improvement being more pronounced in EG2. Meanwhile, the paired-samples t-test was used to test the mean scores of the three classes in English writing in terms of idea / content, organization, vocabulary, grammar, and cohesion / coherence, which yielded that there was no significant difference in any of the five aspects of CG, and that EG1 showed a significant improvement in vocabulary and cohesion / coherence. EG2 showed significant improvement in sub-items (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence). In other words, the use of peer feedback and the use of both teacher feedback and peer feedback helped high school students' writing performance, with the combination of teacher feedback and peer feedback providing the greatest enhancement. Using teacher feedback and peer feedback, students were able to significantly enhance their writing ability in terms of idea / content, organization, vocabulary, grammar, and cohesion / coherence.

4.4.2 Research Question 2: What Are the Factors Contributing to the Effectiveness of Peer Feedback Impact on Chinese EFL High School Students' Writing Performance (i.e., Idea / Content, Organization, Vocabulary, Grammar, and Cohesion / Coherence)

In order to investigate the factors contributing to the effectiveness of peer feedback impact on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence), all participants in EG1 and EG2 were invited to answer a questionnaire based on a 5-point Likert scale (from item 1 to item 22) after the treatment. The questionnaire adopted the Peer Feedback Orientation Scale (Kasch, Van Rosmalen, Henderikx, & Kalz, 2022). The questionnaire was divided into the following dimensions: accountability, communicativeness, utility, self-efficacy and receptivity. Each item was analyzed in a descriptive way to determine its mean, frequency, maximum and minimum values as follows.

Table 4.12 : Descriptive Statistics of Accountability

items	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Totally disagree	disagree	neutral	agree	Totally agree
Accountability	100	1.20	5.00	3.5320	.86514					
Q1	100	1.00	5.00	3.3200	1.08134	7%	16%	25%	42%	10%
Q2	100	1.00	5.00	3.5300	1.00960	4%	11%	28%	42%	15%
Q3	100	1.00	5.00	3.5500	1.00880	3%	13%	26%	42%	16%
Q4	100	1.00	5.00	3.4700	.97913	4%	13%	25%	48%	10%
Q5	100	1.00	5.00	3.7900	1.02784	2%	12%	17%	43%	26%

Table 4.12 shows the first dimension of the questionnaire, which explores whether accountability is a validity factor for the influence of peer feedback on Chinese EFL high school students' writing performance (i.e., content, organization, vocabulary, grammar, and coherence/cohesion). The mean

score of Item 1 was 3.320 and 52% of the respondents were positive, stating that as a peer feedback provider, they feel responsible for providing feedback that helps others. A total of 16% of the participants did not feel that it was their responsibility as peer feedback providers to offer feedback that would help others. In addition, a further 25% of participants were neutral on the matter. In Item 2, 15% of the participants chose a negative view, and 28% of the participants were neutral about responsibility as a factor of effectiveness of peer feedback in influencing the writing performance of Chinese English high school students, with a mean score of 3.530. However, 57% of the participants felt that as a peer feedback provider, they should be responsible for the peer feedback they provided. In item 3, fifty-eight students, as peer-feedback receivers, always took all feedback received seriously to see if it was useful to them (i.e., 42% agree and 16% totally agree), with a mean score of 3.550. There are twenty-six students who took a neutral attitude and sixteen students disagreed that all feedback received was useful to them. In item 4, seventeen participants had a completely negative view that responsibility can influence peer feedback, twenty-five students had a neutral position, and fifty-eight students wanted others to benefit from their feedback, with a mean score of 3.470. In item 5, only two participants had a completely negative view of how accountability can influence peer feedback, seventeen students had a neutral position, and sixty-nine students felt that as a peer feedback provider, they would be happy to be subjected to the way in which they provide feedback, with a mean score of 3.790. Therefore, it can be concluded that majority of students in EG1 and EG2 believe that accountability is a valid factor for the influence of peer feedback on Chinese

EFL high school students' writing performance.

Table 4.13 : Descriptive Statistics on Communicativeness

items	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Totally disagree	disagree	neutral	agree	Totally agree
Communicativeness	100	1.20	5.00	3.5240	.85412					
Q6	100	1.00	5.00	3.6200	.96169	3%	8%	30%	42%	17%
Q7	100	1.00	5.00	3.6200	.94045	2%	10%	28%	44%	16%
Q8	100	1.00	5.00	3.3500	1.06719	5%	18%	26%	39%	12%
Q9	100	1.00	5.00	3.5400	.99919	3%	15%	20%	49%	13%
Q10	100	1.00	5.00	3.4900	1.02981	2%	18%	25%	39%	16%

The second construct, designed to assess whether communication skills are an effective factor on the impact of peer feedback on Chinese high school students' English writing performance, also included five items, ranging from item 6 to item 10. According to Table 4.13, the mean score of each item was below 4 yet above 3 points (i.e., Mean 6=3.620, Mean 7= 3.620, Mean 8= 3.350, Mean 9= 3.540, Mean 10= 3.490). In item 6, 59% of the students in EG1 and EG2 confirmed that as a peer feedback provider, it's much more objective to give feedback when you don't know the recipient yourself (i.e., 42% agree and 17% totally agree), and 30% took a neutral standpoint, while 11% perceived negatively (i.e., 8% disagree and 3% totally disagree). In item 7, twelve students chose the negative option accounting for 12% and twenty-eight students chose a neutral attitude, the remaining 60% of students feel insecure when they get feedback from a very good person. In Item 8, 23% of the participants chose a negative view, and 26% of the participants were neutral about communicativeness as a factor of effectiveness of peer feedback in influencing the writing performance of Chinese English high school students, with a mean score of 3.350. However, 51% of students

indicated that as a peer feedback provider, they do their best when giving feedback. In item 9, majority of the students in EG1 and EG2 believed that there must be a balance between positive and negative feedback (i.e., 49% agree and 13% totally agree). In item 10, only two participants had a completely negative view that communicativeness can influence peer feedback, twenty-five students had a neutral position, and fifty-five students reported being more willing to provide feedback when they heard that people appreciated their feedback, with a mean score of 3.490. More than 50% of the students in each item had positive attitudes, it reflects that communicativeness is a validity factor for the influence of peer feedback on Chinese EFL high school students' writing performance.

Table 4.14 : Descriptive Statistics on Utility

items	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Totally disagree	disagree	neutral	agree	Totally agree
Utility	100	1.00	5.00	3.5267	.92863					
Q11	100	1.00	5.00	3.3600	1.02020	5%	15%	29%	41%	10%
Q12	100	1.00	5.00	3.5100	1.01995	3%	16%	22%	45%	14%
Q13	100	1.00	5.00	3.7100	1.09448	4%	11%	21%	38%	26%

The next construct is to explore whether utility is a validity factor for the influence of peer feedback on Chinese EFL high school students' writing performance, consisting of three items, from item 11 to item 13. According to Table 4.14, the mean score of these three items were 3.360, 3.510 and 3.710. In item 11, twenty students did not admit that as peer-feedback receivers, they would accept it sooner if it is substantiated, while fifty-one students admitted on the idea, where forty-one of them agree and 10 totally agree. In addition, twenty-nine students took a neutral attitude. Regarding item 12,

there were nineteen students who took the negative options (i.e., 3% totally disagree and 16% disagree), 22% took a neutral attitude and fifty-nine students believed that peer-feedback becomes more useful when they can discuss it (i.e., 45 agree and 14 totally agree). As for item 13, 15% of the participants in EG1 and EG2 selected the negative options (i.e., 4% totally disagree and 11% disagree) and 21% took a neutral standpoint. It was worth noticing that 38% agree and 26% totally agree that they want to know from whom to get feedback for follow-up communication. In general, more than 50% of the students in each item had positive attitudes, which reflects that utility is a validity factor for the influence of peer feedback on Chinese EFL high school students' writing performance.

Table 4.15 : Descriptive Statistics on Self-Efficacy

items	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Totally disagree	disagree	neutral	agree	Totally agree
Self-Efficacy	100	1.40	5.00	3.5300	.79003					
Q14	100	1.00	5.00	3.4900	.97954	3%	13%	29%	42%	13%
Q15	100	1.00	5.00	3.4400	.92463	2%	14%	32%	42%	10%
Q16	100	1.00	5.00	3.5400	.92573	3%	9%	31%	45%	12%
Q17	100	1.00	5.00	3.5700	.95616	3%	10%	28%	45%	14%
Q18	100	1.00	5.00	3.6100	.99387	4%	7%	31%	40%	18%

Table 4.15 presents the fourth dimension of the questionnaire to investigate whether self-efficacy is a validity factor for the influence of peer feedback on Chinese EFL high school students' writing performance. The mean score for item 14 was 3.490 and there were fifty-five students took positive options believing that as a peer-feedback provider, they have confidence in the peer-feedback process. Regarding item 15, 52% of the participants in EG1 and EG2 agreed that as a peer-feedback provider, they have enough content

knowledge to be able to give each other feedback (i.e., 42% totally agree and 10% totally agree). In item 16, there were thirty-one participants who responded from a neutral standpoint and the rest 67% selected took the positive options. They know how to make the most of peer feedback. As for item 17, majority of EG1 and EG2, in which fifty-nine students selected positive options (i.e., 45% agree and 14% totally agree) and only 3% totally disagree. In item 18, most participants, accounting for 58%, believed that a good and safe atmosphere in the group positively influences the peer-feedback process. There were 11 % participants who held negative perceptions. Collectively, since the mean scores of this dimension ranged from 3.440 to 3.610 varying from a neutral attitude to agree attitude, it reflects that self-efficacy is a valid factor for the influence of peer feedback on Chinese EFL high school students' writing performance.

Table 4.16 : Descriptive Statistics on Receptivity

items	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Totally disagree	disagree	neutral	agree	Totally agree
Receptivity	100	1.25	5.00	3.5375	.94973					
Q19	100	1.00	5.00	3.6700	1.06415	2%	14%	24%	35%	25%
Q20	100	1.00	5.00	3.6300	1.06983	4%	11%	25%	38%	22%
Q21	100	1.00	5.00	3.4400	1.17482	8%	14%	22%	38%	18%
Q22	100	1.00	5.00	3.4100	1.00599	5%	13%	28%	44%	10%

The last construct, designed to assess whether receptivity is an effective factor in the impact of peer feedback on Chinese high school students' English writing performance, also included four items, ranging from item 19 to item 22. According to Table 4.16, the mean score of each item was below 4 yet above 3 points (i.e., Mean 19=3.670, Mean 20= 3.630, Mean 21= 3.440, Mean 22= 3.410). In item 19, 60% of the students in EG1 and EG2 confirmed

that even if someone else has a different point of view, there may still be something valuable in it (i.e., 35% agree and 25% totally agree), and 24% took a neutral standpoint, while 16% perceived negatively (i.e., 2% disagree and 14% totally disagree). In item 20, fifteen students chose the negative option accounting for 15% and 25% chose a neutral attitude, the remaining 60% of students accept feedback from everyone, regardless of whether they can get along with the person or not. In Item 21, 22% of the participants held a negative view, and 22% of the participants were neutral about receptivity as a factor of effectiveness of peer feedback in influencing the writing performance of Chinese English high school students. However, 56% of participants indicated that as a peer-feedback receiver, they are open to different points of view and know that there is not always one correct answer. In item 22, majority of students in EG1 and EG2 believed that as peer-feedback receivers, they were able to process both positive and negative peer-feedback (i.e., 44% agree and 10% totally agree). All told, majority of students were satisfied with receptivity as an effective factor in the impact of peer feedback on Chinese high school students' English writing performance.

After conducting descriptive statistical analysis, this study used one-way ANOVA to further examine whether there were significant differences in the effects of different feedback conditions (CG, EG1, EG2) on students' writing performance. Specifically, ANOVA was used to compare the differences in writing performance between the three groups. The following are the descriptive statistics of the writing scores of each group of students, as shown

in table 4.17.

Table 4.17 : Descriptive Statistics of Writing Scores of Each Group of Students

Writing performance		Descriptive						
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum Maximum
						Lower Bound	Upper Bound	
CG	50	15.3200	2.30740	.32632		14.6642	15.9758	11.00 20.00
EG1	50	16.9000	2.20621	.31200		16.2730	17.5270	13.00 22.00
EG2	50	19.7400	2.38883	.33783		19.0611	20.4189	14.00 24.00
Total	150	17.3200	2.93171	.23937		16.8470	17.7930	11.00 24.00

In Table 4.17, one-way Anova was used to assess whether there were significant differences in writing performance under different feedback conditions. The results showed that there was a significant difference between the two groups. The F value was 47.331, and the P value was 0.000, which was lower than the significant level of 0.05. The results of LSD multiple comparisons show that there are significant differences in writing performance between the control group (CG) and the experimental groups (EG1 and EG2), and the experimental group's writing performance is significantly higher than that of the control group. The following are the detailed results of ANOVA analysis (see Table 4.18).

Table 4.18 : ANOVA Results: Differences in Writing Performance across Groups

ANOVA					
Writing performance					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	501.640	2	250.820	47.331	.000
Within Groups	779.000	147	5.299		
Total	1280.640	149			

According to ANOVA results (table 4.18), the f-value was 47.331 at a significance level of 0.000, indicating a significant difference in writing scores among the three groups. A further LSD multiple comparison showed that there were significant differences between the control group (CG) and the Experimental Group 1(EG1)($p = 0.001$), and the writing performance of EG1 Group was significantly higher than that of CG group. There was also a significant difference between the control group and the experimental group (EG2)($p = 0.000$). There was also a significant difference between Group 1 and Group 2($p = 0.000$), and EG2 scored significantly higher than EG1. These results suggest that students who combine teacher feedback and peer feedback (EG2) perform best on writing scores, while students who only receive peer feedback (EG1) also perform better than students who only receive teacher feedback (CG).

After completing the one-way Anova analysis and confirming the significant differences between the different feedback conditions (CG, EG1, EG2) on students' writing performance, this study further explored the factors that affect peer feedback on students' writing performance. In order to better understand how each variable affects writing performance while controlling

for other factors, this study conducted a regression analysis. Regression analysis helps to identify the specific factors that affect writing performance, especially regarding the five dimensions in the questionnaire: Accountability, Communicativeness, Utility, Self-Efficacy, Receptivity. Through regression analysis, we can explore how these factors are associated with students' writing performance, thus further verifying whether these factors play an important role in the improvement of writing performance. In this study, accountability, communicativeness, utility, self-efficacy, and receptivity were considered independent variables, while writing performance was the dependent variable. To examine the effect of these factors on writing performance, a multiple regression analysis was conducted using SPSS 24.0 software, and the results are presented below.

Table 4.19 : Descriptive Statistics for Writing Performance Regression Models

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 ^a	.688	.671	1.54648

According to Table 4.19, the multiple correlation coefficient R-value is 0.829, indicating a strong linear relationship between the independent variables and the dependent variable. The coefficient of determination R^2 is 0.688, suggesting that the model explains 68.8% of the variance in writing performance. This demonstrates that the independent variables collectively provide a substantial explanatory power for the dependent variable.

Table 4.20 : Regression Analysis for Overall Significance Test of Writing Performance (ANOVA)

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	494.951	5	98.990	41.391	.000 ^b
Residual	224.809	94	2.392		
Total	719.760	99			

The ANOVA table above provides the results of testing the overall significance of the regression model (see Table 4.20). The ANOVA results show that the value of F is 41.391 ($p < 0.001$), indicating that the overall regression model is statistically significant. This means that at least one of the independent variables significantly predicts writing performance. However, the F-test alone does not determine which specific factors are significant predictors. To address the research question, we examine the standardized regression coefficients (β) and significance values (p) of each independent variable in Table 4.20.

Table 4.21 : Coefficients of Regression Analysis of Peer Feedback Factors Influencing Writing Performance

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.473	.919		5.955	.000
1 Accountability	.803	.199	.258	4.041	.000
Communicativeness	.576	.244	.183	2.359	.020
Utility	1.004	.196	.346	5.127	.000
Self_Efficacy	.868	.263	.254	3.301	.001
Receptivity	.388	.189	.137	2.050	.043

a. Dependent Variable: writing performance

Table 4.21 presents the standardized regression coefficients (β) for each

predictor. Among the five independent variables, utility ($\beta = 0.346$, $p < 0.001$) has the strongest predictive effect on writing performance, indicating that students who perceive peer feedback as useful tend to have better writing performance. Self-efficacy ($\beta = 0.254$, $p = 0.001$) and accountability ($\beta = 0.258$, $p < 0.001$) also show significant positive effects, suggesting that students who feel confident in their feedback abilities and take responsibility for feedback engagement are more likely to improve their writing. Meanwhile, communicativeness ($\beta = 0.183$, $p = 0.020$) and receptivity ($\beta = 0.137$, $p = 0.043$) have relatively weaker but still significant positive effects on writing performance. These findings indicate that while all five factors contribute to writing improvement, utility plays the most dominant role, followed by self-efficacy and accountability.

Through descriptive statistics and frequency analysis of each dimension of the questionnaire, it was found that the mean scores of each item ranged between 3 and 4, suggesting that participants in both EG1 and EG2 perceived that the five factors—accountability, communicativeness, utility, self-efficacy, and receptivity—affected the influence of peer feedback on writing performance, with attitudes ranging from neutral to agreeable. Specifically, a majority of participants emphasized the importance of accountability, both as feedback providers and receivers. Many reported that they provided more objective feedback when they were unfamiliar with the recipient, felt uneasy receiving feedback from high-level peers, and preferred a balance between positive and negative feedback. Additionally, over 50% of participants in EG1 and EG2 expressed a preference for knowing the identity

of their feedback providers to facilitate further discussion. They also reported feeling confident in their ability to provide peer feedback effectively and recognized the importance of receptivity in considering different perspectives. Even when feedback differed from their own viewpoints, they acknowledged the potential value of alternative insights.

The regression analysis results confirm that accountability, communicativeness, utility, self-efficacy, and receptivity significantly predict improvements in writing performance. Among these, utility had the strongest predictive effect, followed by accountability and self-efficacy, indicating that students who found peer feedback useful and believed in their ability to utilize it effectively tended to experience greater improvements in writing performance. These findings align with previous research suggesting that peer feedback effectiveness depends on both the quality of feedback received and the willingness of students to engage with and apply that feedback constructively. These results provide a clear answer to the research question by identifying which factors of peer feedback significantly predict writing performance. The findings suggest that utility, self-efficacy, and accountability are the most influential factors, while communicativeness and receptivity also play a role.

After performing regression analysis, this study further adopted an analysis of covariance (ANCOVA) to control for five potential factors (Accountability, Communicativeness, Utility, Self-Efficacy, Receptivity), the effects of different classes (CG, EG1, EG2) on students' writing performance were also

discussed. ANCOVA is helpful to eliminate the interference of these control variables, so as to more accurately assess the independent effect of class type on students' writing performance.

Table 4.22 : ANCOVA Results for Writing Performance with Covariates

Tests of Between-Subjects Effects					
Dependent Variable: writing performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	629.660 ^a	7	89.951	19.621	.000
Intercept	495.088	1	495.088	107.995	.000
Accountability	12.092	1	12.092	2.638	.107
Communicativeness	12.333	1	12.333	2.690	.103
Utility	32.501	1	32.501	7.089	.009
Self_Efficacy	.062	1	.062	.014	.908
Receptivity	1.606	1	1.606	.350	.555
groups	429.868	2	214.934	46.884	.000
Error	650.980	142	4.584		
Total	46278.000	150			
Corrected Total	1280.640	149			

a. R Squared = .492 (Adjusted R Squared = .467)

According to the results of ANCOVA, the adjusted model is significant ($F(7,142) = 19.621, p < 0.001$), indicating that the five control variables and the role of the class have a significant impact on students' writing scores. Further analysis revealed that the class effect on writing performance was significant ($F(2,142) = 46.884, p < 0.001$), indicating that after controlling for the interference of factors such as accountability, communicativeness, utility, self-efficacy, and receptivity, the class effect on writing performance was not significant, the effect of different feedback conditions on writing performance is still significant.

In particular, the writing performance of EG2 is significantly higher than that of CG and EG1(both $p < 0.001$) , and the writing performance of EG1 is also significantly higher than that of CG ($p < 0.001$) . However, control variables such as accountability, communicativeness, and self-efficacy did not show significant effects ($P > 0.05$) , while Utility had a significant effect on writing performance ($F(1,142) = 7.089, p = 0.009$) , it indicates that utility plays an important role in the improvement of students' writing performance in the process of peer feedback. In general, the ANCOVA results further confirmed the effect of feedback type on writing performance, especially after controlling for other variables. It can be concluded that different types of feedback in different classes have an independent and significant impact on students' writing performance, and in the use of peer feedback, the utility dimension has a particularly prominent impact on writing performance.

4.4.3 Research Question 3: What Are Chinese EFL High School Students' Perceptions of Peer Feedback on Their English Writing

Another survey questionnaire was used to examine Chinese EFL high school students' perceptions of peer feedback on their English writing, particularly in terms of interest, uses and effects on writing performance after 8 weeks of treatment. The questionnaire had 30 questions in the form of a Likert scale (A=completely disagree; B=disagree; C=neutral; D=agree; E=strongly agree). All the participants in EG1 and EG2 were invited to respond to the questionnaire. The recovery and validity rates were 100%. Each item was analyzed in a descriptive manner to determine its mean, frequency, maximum and minimum values.

Table 4.23 : Descriptive Statistics of Interest in Reading Peer Composition

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Completely disagree	disagree	neutral	agree	Strongly agree
Interest	100	1.00	4.86	3.4043	.72019					
Q1	100	1.00	5.00	3.4200	.92310	2%	12%	40%	34%	12%
Q2	100	1.00	5.00	3.4400	.93550	2%	14%	33%	40%	11%
Q3	100	1.00	5.00	3.2200	.95959	4%	18%	37%	34%	7%
Q4	100	1.00	5.00	3.4300	.87911	2%	11%	38%	40%	9%
Q5	100	1.00	5.00	3.3800	.96169	4%	12%	36%	38%	10%
Q6	100	1.00	5.00	3.3700	.92829	4%	10%	40%	37%	9%
Q7	100	1.00	5.00	3.5700	.93479	2%	9%	35%	38%	16%

Table 4.23 shows the first dimension of the questionnaire, which was used to explore the interest of students in Experimental Group 1 (EG1-peer feedback) and Experimental Group 2 (EG2-teacher and peer feedback) in reading their peers' compositions. In item 1 "I am interested in peer feedback as a teaching method", 14% of the participants had a negative attitude (i.e., 2% completely disagree, 12% disagree), and there was a small difference between the percentages of neutral and agree, 40% and 46%, respectively (i.e., 34% agree and 12% strongly agree). In item 2, there were fifty-one students in EG1 and EG2 took positive options believing they like reading other students' English compositions, while there were still 2% and 14% of participants who strongly disagreed and disagreed with the idea respectively. Regarding item 3, the highest percentage of participants were neutral (37%), followed by students who chose the agree option, which accounted for 34%, and seven students who strongly agreed that they all preferred to have their English essays read by others. In item 4, nearly 50% of the participants enjoyed discussing other people's essays with their group members and 38% were neutral about this, however, 2% still strongly disagreed. As for item 5, four and twelve students chose the completely disagree and disagree options,

respectively, while thirty-six students remained neutral and the remaining 48 indicated a preference for having other students discuss their essays. In item 6, no more than 50% of the participants claimed to enjoy commenting on other students' essays (i.e., 37% agree, 9% strongly agree), with 14% stating that they disagreed with the viewpoint and the remaining 40% maintaining a neutral standpoint. In item 7, there is 38% of the students selected positive options, a percentage similar to those who chose a neutral viewpoint (i.e., 35% neutral). This suggests that students are generally interested in reading their peers' compositions, ranging from neutral to agreeable, with mean scores ranging from 3.220 to 3.570.

Table 4.24 : Descriptive Statistics on Usefulness of Reading Peer Compositions

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Completely disagree	disagree	neutral	agree	Strongly agree
usefulness	100	1.33	5.00	3.7133	.75956					
Q8	100	1.00	5.00	3.7500	.92524	1%	8%	28%	41%	22%
Q9	100	1.00	5.00	3.6700	.87681	2%	4%	36%	41%	17%
Q10	100	2.00	5.00	3.7300	.90849	0%	10%	28%	41%	21%
Q11	100	1.00	5.00	3.7600	.95473	1%	8%	30%	36%	25%
Q12	100	1.00	5.00	3.6900	1.00197	1%	11%	31%	32%	25%
Q13	100	1.00	5.00	3.6800	.91982	2%	6%	33%	40%	19%

In the second dimension of the questionnaire, participants' perceptions of the usefulness of reading peer composition showed a high degree of consistency, with a mean of 3.7133 and a standard deviation of 0.75956. The mean scores for each of the questions from item 8 to item 13 ranged from 3.670 to 3.760, respectively, which was a moderate to moderately high overall trend. Specifically, more than 60% of the participants in item 8, 10, and 11 tended to be positive, 63%, 62%, and 61%, respectively, especially in item 10, where there was no strong opposition. On the other hand, for item 12, 57% of the

participants “agree” and “strongly agree”, showing a more positive attitude towards the question. Overall, participants in EG1 and EG2 held a variety of views on the “usefulness of reading peer composition” but showed a more positive tendency in their overall perceptions.

Table 4.25 : Descriptive Statistics on Idea

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Completely disagree	disagree	neutral	agree	Strongly agree
idea	100	1.25	5.00	3.4350	.82543					
Q14	100	1.00	5.00	3.3200	1.04330	7%	12%	33%	38%	10%
Q15	100	1.00	5.00	3.5000	1.01005	5%	9%	31%	41%	14%
Q16	100	1.00	5.00	3.5100	.93738	3%	8%	38%	37%	14%
Q17	100	1.00	5.00	3.4100	.92217	4%	9%	38%	40%	9%

Table 4.25 is the third dimension of the questionnaire to explore EG1 and EG2 students’ perception of how reading their peers’ compositions affected their own idea / content. Participants’ perceptions of idea / content were moderate overall, with a mean of 3.4350 and a standard deviation of 0.82543, reflecting the relative dispersion of participants’ perceptions in this area. Specifically, in item14, the mean score was 3.32, showing that participants tended to be neutral with regard to this question. 7% of participants completely disagreed, 12% held a disagreement, 38% were neutral, 38% held an agreement, and 10% strongly agreed. The mean score for Item 15 was 3.50, reflecting the fact that participants tended to be moderately to agree overall on this question. 5% of participants disagreed completely, 9% held a disagreement, 31% were neutral, 41% held an agreement, and 14% strongly agreed. Regarding item 16, the mean score was 3.51, showing that participants tended to have moderate to agreeing attitudes towards this

question. In item 17, the mean score was 3.41, reflecting the fact that overall participants tended to have a moderate to agreeable attitude towards the question. 4% of participants completely disagreed, 9% held a disagreeable attitude, 38% were neutral, 40% held an agreeable attitude, and 9% strongly agreed. Mean scores for item 14 through item 17 ranged from 3.32 to 3.51, which is moderate overall. Overall, participants held more diverse and dispersed views and were relatively neutral on the question of whether reading their peers' compositions helped their idea / content. The relatively large standard deviation indicates that participants' views on these issues are relatively dispersed rather than concentrated.

Table 4.26 : Descriptive Statistics on Organization

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Completely disagree	disagree	neutral	agree	Strongly agree
organization	100	1.00	5.00	3.7700	.97752					
Q18	100	1.00	5.00	3.7800	1.03064	4%	6%	24%	40%	26%
Q19	100	1.00	5.00	3.7400	1.05044	3%	10%	23%	38%	26%
Q20	100	1.00	5.00	3.7900	1.06643	4%	8%	21%	39%	28%

Table 4.26 is the fourth dimension of the questionnaire to explore EG1 and EG2 students' perception of how reading their peers' compositions affected their own organization. According to Table 4.26, participants' perceptions of organization were overall moderately high, with a mean of 3.77 and a standard deviation of 0.97752, reflecting relative agreement but some dispersion of perceptions. Specifically, in item 18, the mean score was 3.78, showing that participants tended to be moderately to overall agree on this question. 4% of participants completely disagreed, 6% held a disagreement, 24% were neutral, 40% agreed, and 26% strongly agreed. In item 19, the

mean score was 3.74, reflecting an overall tendency for participants to be moderately to agree with this question. 3% of participants disagreed completely, 10% held a disagreeing attitude, 23% were neutral, 38% were in agreement, and 26% strongly agreed. Regarding item 20, the mean score was 3.79, indicating that participants tended to have moderate to agreeing attitudes overall on this question. It can be seen that the average scores for each question from item 18 to item 20 ranged from 3.74 to 3.79, showing an overall moderate to medium-high level. In general, participants held more consistent, but also slightly dispersed, views on “reading peers’ compositions helped them organize their own essays,” with a medium-high overall level of agreement.

Table 4.27 : Descriptive Statistics of Vocabulary

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Complete ly disagree	disagree	neutral	agree	Strongly agree
vocabulary	100	1.67	5.00	4.0233	.90671					
Q21	100	1.00	5.00	4.0000	.97442	1%	7%	20%	35%	37%
Q22	100	1.00	5.00	4.0100	1.02981	2%	6%	22%	29%	41%
Q23	100	1.00	5.00	4.0600	.94088	1%	4%	23%	32%	40%

Table 4.27 is the fifth dimension of the questionnaire to explore EG1 and EG2 students’ perceptions of how reading their peers’ compositions affected their own vocabulary. Participants’ perceptions of vocabulary showed a high level with a mean of 4.0233 and a standard deviation of 0.90671, reflecting a relatively consistent but somewhat dispersed perception in this area. In item 21, the mean score of 4.00 shows that the participants as a whole tended to hold a moderate to agreeable attitude towards this question. 1% of participants completely disagreed, 7% held a disagreeable attitude, 20%

were neutral, 35% held an agreeable attitude, and 37% strongly agreed. Regarding item 22, the mean score of 4.01 reflects the fact that for this question, participants tended to hold a moderate to agreeable attitude overall. 2% of participants completely disagreed, 6% held a disagreeable attitude, 22% were neutral, 29% held an agreeable attitude, and 41% strongly agreed. As for item 23, the mean score of 4.06 shows that for this question, participants tended to hold a moderate to agreeable attitude overall. 1% of participants completely disagreed, 4% held a disagreeable attitude, 23% were neutral, 32% held an agreeable attitude, and 40% strongly agreed. The average scores for each question from item 21 to item 23 ranged from 4.00 to 4.06, showing a medium-high level overall. Overall, there was a relatively high level of agreement, but also some dispersion, among participants on the idea that “peer feedback improves vocabulary”.

Table 4.28 : Descriptive Statistics on Grammar

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Completely disagree	disagree	neutral	agree	Strongly agree
grammar	100	2.00	5.00	4.1400	.84112					
Q24	100	1.00	5.00	4.0900	.96499	1%	6%	18%	33%	42%
Q25	100	2.00	5.00	4.1800	.90319	0%	5%	18%	41%	36%
Q26	100	2.00	5.00	4.1500	.86894	0%	4%	19%	35%	42%

Table 4.28 is the sixth dimension of the questionnaire to explore EG1 and EG2 students' perception of how reading their peers' compositions affected their own grammar. According to Table 4.24, participants' perceptions of grammar showed a high level with a mean of 4.14 and a standard deviation of 0.84112, reflecting a relatively consistent but somewhat dispersed view of this area. Specifically, in the case of item 24, the mean score of 4.09 shows that

participants as a whole tended to hold a moderate to agreeable attitude towards this question. 1% of participants completely disagreed, 6% held a disagreeable attitude, 18% were neutral, 33% held an agreeable attitude, and 42% strongly agreed. In item 25, the mean score of 4.18 reflects the fact that for this question, participants tended to hold a moderate to agreeable attitude overall. No one completely disagreed, 5% held a disagreeable attitude, 18% were neutral, 41% held an agreeable attitude, and 36% strongly agreed. As for item 26, the mean score of 4.15 shows that for this question, participants as a whole tended to hold a moderate to agreeable attitude. No one completely disagreed, 4% held a disagreeable attitude, 19% were neutral, 35% held an agreeable attitude, and 42% strongly agreed. The mean scores for questions from item 24 to item 26 ranged from 4.09 to 4.18, with an overall medium-high level. Overall, there was a high level of agreement, but also some dispersion of opinion, on the idea that “peer feedback improves grammar”.

Table 4.29 : Descriptive Statistics on Cohesion / Coherence

	Descriptive Statistics					Scale Frequencies				
	N	Minimum	Maximum	Mean	Std. Deviation	Completely disagree	disagree	neutral	agree	Strongly agree
cohesion	100	1.25	5.00	3.4125	.83513					
Q27	100	1.00	5.00	3.5200	.94794	2%	11%	35%	37%	15%
Q28	100	1.00	5.00	3.4900	.99995	4%	10%	34%	37%	15%
Q29	100	1.00	5.00	3.3200	.98350	6%	10%	39%	36%	9%
Q30	100	1.00	5.00	3.3200	.88626	5%	8%	42%	40%	5%

Table 4.29 is the last dimension of the questionnaire to explore EG1 and EG2 students' perception of how reading their peers' compositions affected their own cohesion / coherence. The results showed that participants' perceptions of coherence / cohesion showed a low to moderate level, with a mean of

3.4125 and a standard deviation of 0.83513, reflecting the relative dispersion of participants' perceptions in this area. In item 27, the mean score of 3.52 shows that participants as a whole tended to hold a moderate to agreeable attitude towards this question. 2% of participants completely disagreed, 11% held a disagreeable attitude, 35% were neutral, 37% held an agreeable attitude, and 15% strongly agreed. In item 28, the mean score of 3.49 reflects the fact that for this question, participants tended to hold a moderate to agreeable attitude overall. 4% of participants completely disagreed, 10% held a disagreeable attitude, 34% were neutral, 37% held an agreeable attitude, and 15% strongly agreed. According to item 29, the mean score of 3.32 shows that for this question, participants tended to hold a neutral to disagreeable attitude overall. 6% of participants completely disagreed, 10% held a disagreeable attitude, 39% were neutral, 36% held an agreeable attitude, and 9% strongly agreed. Regarding to item 30, the mean score of 3.32 shows that the participants as a whole tended to hold a neutral to disagreeable attitude towards this question. 5% of participants completely disagreed, 8% held a disagreeable attitude, 42% were neutral, 40% held an agreeable attitude, and 5% strongly agreed. The mean score for each question from item 27 to item 30 ranged from 3.32 to 3.52, showing an overall low to moderate level. Overall, participants' views on "Peer feedback contributes to coherence" were more dispersed, with an overall low to moderate level of agreement. The relatively large standard deviation indicates that participants' views on these issues are relatively dispersed and less centralized.

The above are the mean and frequency analyses of EG1 and EG2 students' perceptions of peer feedback. While analysis of means and frequency analysis can provide information about the overall trend and distribution of each variable within each class, independent samples t-tests can provide a more specific indication of whether or not these differences are statistically significant. Therefore, independent samples t-tests were conducted next to examine whether there were significant differences between the two classes on the dimensions covered by the questionnaire (see Table 4.30).

Table 4.30 : Comparative Analysis of Questionnaire Scores between EG1 and EG2

	group	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Interest	EG2	50	3.5200	.68101	1.620	.108
	EG1	50	3.2886	.74622		
usefulness	EG2	50	3.8767	.61428	2.191	.031
	EG1	50	3.5500	.85665		
idea	EG2	50	3.5550	.71659	1.462	.147
	EG1	50	3.3150	.91307		
organization	EG2	50	4.2067	.78504	4.974	.000
	EG1	50	3.3333	.96186		
vocabulary	EG2	50	4.2333	.71349	2.369	.020
	EG1	50	3.8133	1.03051		
grammar	EG2	50	4.3533	.62962	2.610	.010
	EG1	50	3.9267	.96958		
cohesion	EG2	50	3.5200	.81729	1.292	.200
	EG1	50	3.3050	.84710		

Table 4.30 demonstrates the comparison of the questionnaires of EG1 and EG2 regarding perceptions of peer feedback after treatment on different dimensions, specifically regarding the means, standard deviations, t-values, and two-tailed significance levels (Sig.) for the different variables. The results of the independent samples t-test for the comparison of questionnaire scores between EG1 and EG2 show that for Interest, the t-distribution value for the

comparison is 1.620, which corresponds to a significance sig value of 0.108, which is greater than 0.05, and does not reach the level of significance. Therefore, there is no significant difference between the Interest scores of EG1 and EG2. There are also no differences between the questionnaire scores of EG1 and EG2 in the dimensions of idea / content and cohesion / coherence. In the dimension of usefulness of peer feedback, the t-distribution value of the comparison is 2.191, which corresponds to a significance sig value of 0.031, which is less than 0.05 and reaches the level of significance. Therefore, there is a significant difference between EG1 and EG2 in the dimension of usefulness. From the categorical mean statistics, it can be seen that the usefulness questionnaire score of EG2 is 3.88, which is significantly higher than the questionnaire score of EG1 which is 3.55. There is also a significant difference between the EG1 and EG2 in terms of organization, vocabulary, and grammar. All of them are higher mean scores of EG2 than EG1.

4.5 Discussion

Based on the data report and data analysis in the previous sections, the following discussion is provided to address the three main research questions and research hypotheses of the current study. In order to answer RQ1: What are the impacts of peer feedback on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence), the following hypotheses from H0 to H6 were tested.

4.5.1 Effectiveness of Peer Feedback on Chinese EFL High School Students' Writing Performance (i.e., Idea / Content, Organization, Vocabulary, Grammar, and Cohesion / Coherence)

Based on the results of this study, the hypothesis of the significant effect of peer feedback on high school students' English writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence) was derived and discussed separately.

4.5.1.1 H0: There is no Significant Difference in Writing Performance (Idea / Content, Organization, Vocabulary, Grammar, and Cohesion / Coherence) between Chinese EFL High School Students Who Receive Peer Feedback and Those Who Do Not Receive Peer Feedback

The null hypothesis (H0) proposed that there would be no significant difference in writing performance between students who received peer feedback and those who did not. However, the results of the study partially rejected H0, as peer feedback showed significant improvement in vocabulary and cohesion / coherence but did not lead to statistically significant differences in idea/content, organization, or grammar. In particular, CG students who only received teacher feedback did not show noticeable progress across the five writing components. EG1, which received peer feedback, demonstrated significant improvement in vocabulary and cohesion/coherence, supporting the idea that peer interactions enhance lexical richness and text cohesion. However, EG1 did not exhibit significant progress in idea/content, organization, or grammar, suggesting that peer feedback alone may not be sufficient to improve these higher-order writing aspects.

These findings align with those of Zhu (2022), who found that while peer response training enhances interaction and engagement in writing, it does not always lead to significant content and organizational improvements. The results also resonate with Vasu et al. (2016), who indicated that students perceive feedback on content and organization as more useful, but peer feedback tends to focus on surface-level aspects such as vocabulary and cohesion.

4.5.1.2 H1: Chinese EFL High School Students Who Receive Peer Feedback Will Show a Significant Improvement in Writing Performance (Idea/Content, Organization, Vocabulary, Grammar, and Cohesion/Coherence) Compared to Those Who Do Not Receive Peer Feedback

This study partially supports H1, indicating that peer feedback contributes to improvements in students' writing performance, though the degree of enhancement varies across different writing aspects. The results reveal that students in EG1 (received peer feedback) exhibited notable gains in vocabulary ($p=0.021$) and cohesion/coherence ($p=0.01$) compared to those in CG (received teacher feedback). However, no statistically significant differences were observed in idea/content ($p=0.458$), organization ($p=0.217$), and grammar ($p=0.312$). Meanwhile, EG2 (received teacher and peer feedback) showed substantial progress in all five dimensions, outperforming both CG and EG1.

These findings align with previous studies, such as Liu (2015) and Yang (2013), which suggest that an integrated feedback approach is more effective than peer feedback alone. However, the limited effect of peer feedback on

higher-order writing skills, including content development and organization, echoes the conclusions drawn by Vasu et al. (2016). This could be due to students' limited ability to critique and suggest improvements beyond surface-level linguistic features. Future research should explore strategies to enhance the efficacy of peer feedback in more complex aspects of writing.

4.5.1.3 H2: Students Who Receive Peer Feedback Will Demonstrate Significantly Better Performance in the Quality of Ideas and Content in Their Writing Compared to Those Who Do Not Receive Peer Feedback

Contrary to expectations, this study does not provide strong support for H2. Although EG1 students demonstrated slightly higher scores in idea/content than CG, the difference was not statistically significant ($p=0.458$). However, students in EG2 achieved a significant increase in this aspect compared to CG and EG1 ($p=0.003$), highlighting the effectiveness of teacher-assisted peer feedback in fostering content development.

The minimal effect of peer feedback on content quality may be attributed to students' difficulties in critically evaluating the depth and coherence of ideas in their peers' writing. This aligns with Osidak et al. (2020), who found that teacher guidance plays a crucial role in enhancing students' ability to refine their ideas and arguments. Moreover, Hui (2017) noted that without structured support, students tend to focus on surface-level feedback, overlooking the need for in-depth content revision. Incorporating explicit training in content-based peer evaluation could be a potential solution for improving this aspect.

4.5.1.4 H3: Students Who Receive Peer Feedback Will Show a Significant Improvement in the Organization of Their Writing Compared to Those Who Do Not Receive Peer Feedback

The study's findings indicate that peer feedback alone does not lead to significant improvements in writing organization, as EG1 did not outperform CG in this area ($p=0.217$). However, EG2 demonstrated a notable enhancement compared to both CG and EG1 ($p=0.006$), suggesting that teacher involvement helps students better understand and refine their text structures.

These results resonate with the findings of Yang (2013), who argued that students often struggle to evaluate global text organization due to a lack of holistic analytical skills. Song (2023) further emphasized that organizational improvements through peer feedback depend on students' cognitive abilities; those with stronger analytical skills benefit more from peer evaluations. Given these insights, future writing instruction should incorporate explicit strategies to help students assess and improve the structural coherence of their writing through peer feedback.

4.5.1.5 H4: Students Who Receive Peer Feedback Will Exhibit a Significant Enhancement in Vocabulary Usage in Their Writing Compared to Those Who Do Not Receive Peer Feedback

The results confirm H4, as EG1 exhibited significant improvements in vocabulary usage compared to CG ($p=0.021$). Additionally, EG2 surpassed both EG1 and CG ($p=0.008$), suggesting that teacher guidance further enhances vocabulary acquisition. These findings are consistent with Zhu (2022), who observed that peer feedback fosters greater awareness of lexical

variety and precision. Through peer interaction, students are exposed to diverse word choices and alternative expressions, which can expand their lexical repertoire. However, the greater gains in EG2 suggest that teacher guidance helps mitigate potential vocabulary misuse, reinforcing the value of a combined feedback approach.

4.5.1.6 H5: Students Who Receive Peer Feedback Will Achieve Significantly Better Grammar Accuracy in Their Writing Compared to Those Who Do Not Receive Peer Feedback

The findings do not support H5, as EG1 did not show statistically significant improvements in grammar accuracy compared to CG ($p=0.312$). However, EG2 displayed substantial gains ($p=0.001$), indicating that teacher involvement is crucial in grammar improvement. This aligns with Hui (2017), who found that peer feedback often lacks reliability in addressing grammatical errors, as students may not possess the necessary expertise to provide accurate corrections. Similarly, He (2023) highlighted that teacher feedback is more effective in guiding students through complex grammatical structures. This suggests that peer feedback, while useful for raising awareness of errors, may not be sufficient for achieving significant grammatical accuracy gains without additional teacher input.

4.5.1.7 H6: Students Who Receive Peer Feedback Will Demonstrate Significantly Improved Cohesion and Coherence in Their Writing Compared to Those Who Do Not Receive Peer Feedback

H6 is supported by the study's results, as EG1 exhibited significant improvements in cohesion and coherence ($p=0.01$) compared to CG.

Additionally, EG2 showed even greater gains ($p=0.015$), reinforcing the benefit of teacher-assisted peer feedback. These findings are consistent with Ji Peipei (2018), who noted that peer feedback encourages students to focus more on text connectivity and logical flow. By reviewing peers' work, students become more aware of discourse markers, reference cohesion, and overall coherence strategies. However, the additional improvement seen in EG2 suggests that teacher feedback helps refine these aspects further by providing clearer structural guidance. Future research could explore ways to optimize peer feedback techniques to maximize improvements in textual cohesion and coherence.

Overall, the study suggests that peer feedback alone has a notable impact on vocabulary and cohesion/coherence, while teacher-assisted peer feedback leads to broader improvements across all writing aspects. The findings highlight the potential benefits of integrating peer feedback into writing instruction while emphasizing the need for teacher support, especially in areas like content development, organization, and grammar. Future pedagogical approaches should aim to train students in effective peer evaluation techniques to maximize the benefits of this collaborative learning strategy.

4.5.2 Factors Contributing to the Effectiveness of Peer Feedback Impact on Chinese EFL High School Students' Writing Performance (i.e., idea / Content, Organization, Vocabulary, Grammar, and Cohesion / Coherence)

In order to address RQ2 (i.e., What are the factors contributing to the

effectiveness of peer feedback impact on Chinese EFL high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence?), the questionnaire was categorized into 5 dimensions and the questionnaire analysis of EG1 and EG2 allowed for conclusions to be drawn. The results indicated that participants' attitudes toward accountability, communication skills, utility, self-efficacy, and receptivity were moderately positive, with mean scores around 3.53, indicating that participants' responses were relatively concentrated around the mean, but there was some dispersion. To further explore the relationship between these factors and writing performance, linear regression analyses were conducted to examine the effects of accountability, communication skills, utility, self-efficacy, and receptivity on writing performance. The findings revealed that all five factors had a significant positive effect on writing performance, providing empirical support for the hypothesis. In comparison, Wang's (2014) study focused on the factors influencing students' perceived usefulness of peer feedback rather than its direct impact on writing performance. Fifty-three Chinese English language learners participated in the study, and data collected included questionnaires, interviews, and students' reflective essays. The results of the study showed that students' perceived usefulness of peer feedback declined over time, and that their perceived usefulness of peer feedback was influenced by five factors: (1) students' knowledge of the assigned essay topic, (2) students' limited English proficiency, (3) students' attitudes toward peer feedback practices, (4) time constraints on peer feedback sessions in the classroom, and (5) students' concerns about interpersonal relationships. While Wang's findings provide

insight into students' perceptions, the present study empirically demonstrates that accountability, communicativeness, utility, self-efficacy, and receptivity are significant predictors of writing performance. This distinction highlights the contribution of the current study in extending the understanding of peer feedback beyond perceptions to measurable writing outcomes.

Activity Theory and Cooperative Learning Theory also provide a theoretical basis for peer feedback to influence Chinese high school students' writing performance. The main purpose of cooperative learning is to promote teacher-student and student-student interactions, and to advocate students' full cooperation in the learning process, shifting from a teacher-centered model to a student-centered, teacher-led model. Peer feedback enables learners to work together to provide more useful information, thus improving learner development more effectively (Storch, 2005). Writing peer feedback can enhance learners' positive attitudes toward writing through peer cooperation and assistance (Paulus, 1999). Cooperative learning also gives students an opportunity to participate in discussions, take responsibility for their own learning, and learn to think critically. Johnson and Johnson (1986) study showed that in group activities participants' learning effectiveness and sense of achievement improved to some extent, interpersonal skills were enhanced, and self-confidence and creativity were further increased. Hirvela's (1999) findings also indicate that students learn more efficiently when working in groups on a variety of tasks than when working individually. In group learning, students of different abilities and levels should not only focus on what they have learned but also help their peers to learn through

cooperation in learning activities, and in order to obtain the best learning results, group members should fully communicate with each other to create a successful learning atmosphere. In the process of writing peer feedback, cooperative learning among group members, each member, in addition to providing written feedback on other group members' essays at the same time, also needs to communicate and exchange their ideas and opinions to other members. In order to make peer feedback go smoothly, students also need to think about how to communicate effectively and how to fully convey their ideas to each other. In this atmosphere of positive communication, students' own learning, thinking ability is also improved. In cooperative learning, students not only gain improvement in language knowledge, but also learn how to think and communicate positively in the atmosphere of group cooperation.

4.5.3 Chinese EFL High School Students' Perceptions of Peer Feedback on Their English Writing

In order to answer RQ3 (i.e., What are Chinese EFL high school students' perceptions of peer feedback on their English writing?), a questionnaire was administered to a total of 100 students in EG1 and EG2, which was categorized into seven dimensions, and the following findings can be derived and discussed from the questionnaire. In the first dimension, no more than 50% of the participants maintained a positive attitude towards "interested in reading their peers' essays", which indicates that most students were not interested in peer feedback, which is inconsistent with the conclusion drawn by Wang (2017) that 81.7% of the students enjoyed reading their classmates'

comments, which means that most of the students gradually accepted the activity and were in a pleasant mood when participating in the activity of receiving feedback. Chang (2021) according to the data results of the questionnaires before and after the experiment and the results of the interviews, it can be seen that students' interest in learning to write in English increased significantly after peer feedback and their fear of writing in English decreased. This indicates that students recognize the help or effect brought by peer feedback. The students' limited interest in peer feedback in this study may be due to the short experimental period of peer feedback and the fact that they are not yet skillful in the use of peer feedback, which can be addressed in the next study in the long term.

In the second dimension, most of the students (60%) had positive attitude towards using peer feedback is useful, reading other students' compositions can broaden horizons and peer revision is very important to write a good article. In Wang's (2017) study, more than half of the students were able to gradually provide feedback on their peers' essays in a positive manner, and by accumulating experience, 56.4% of them would eventually improve the quality of their feedback with the help of different means. Regarding the effects of the activity of providing feedback, although only 30.8% of the students thought that this activity could improve their motivation to write, more than half of the students felt that reviewing other students' essays could broaden their own ideas about writing and help improve the content and organization of their own writing. It can be seen that students who received peer feedback had a high level of acceptance of peer feedback as

advantageous both in terms of their English writing skills and in terms of broadening their horizons.

In the third dimension, the proportions of those who agreed, neutral and disagreed were 50.8%, 35% and 14.2%, respectively, which shows that only half of the students think that peer feedback can improve their English writing content. This is in line with Chang's (2021) findings that most of the students perceived that peer feedback helped them in their English writing, with the more obvious aspects that helped being: idea / content aspects, such as reviewing the topic, argumentation clear points of view, etc., the correctness and richness of vocabulary and sentence grammar use and logical contextualization are the main three main aspects. The post-experiment questionnaire also showed that most of the students participated in the peer-feedback practice in a serious and objective manner and provided comments on the revisions. with peer feedback practices and suggested revisions.

In the fourth, fifth, and sixth dimensions, 65.7%, 71.3%, and 76.3% of the participants chose the agree or strongly agree option, respectively, which demonstrates that the vast majority of the students were positive that peer feedback improves organization, vocabulary, and grammar in English writing. In addition, the results of the independent samples t-test comparing the questionnaire scores of the EG1 and EG2 showed that the corresponding significance sig values in the areas of organization, vocabulary, and grammar were 0.000, 0.020, and 0.010, which were less than 0.05 and reached the

level of significance. Thus, there is a significant difference between EG1 and EG2 in terms of organization, vocabulary, and grammar. That is, students who received both teacher feedback and peer feedback were more likely to agree that peer feedback improves organization, vocabulary, and grammar than students who received only peer feedback.

In the last dimension, no more than 50% of students in EG1 and EG2 agreed that peer feedback was helpful for coherence in English composition. This result reveals that students generally recognize peer feedback for improving coherence. This is consistent with the ideas presented by Zhai (2019). Zhai (2019) divided the two sophomore classes into a receiving feedback class and a providing feedback class, and the results of the study showed that in terms of writing ability, after a semester of peer feedback activities, the students in the receiving feedback class showed a significant improvement in their writing performance in the five areas of content, organization, language, vocabulary, and coherence of writing. On the other hand, the students in the feedback-giving class only showed significant improvement in content, organization, language, and vocabulary, but not in coherence. This may be due to the fact that the peers had limited English proficiency and were unable to provide deeper feedback, while coherence was a particular test of students' English proficiency, which needed to be supplemented by teacher feedback.

It can be seen that Chinese EFL high school students generally perceive peer feedback as positively influencing their English writing, especially in the aspects of usefulness of peer feedback, organization, vocabulary and

grammar.

4.6 Summary

This chapter discusses the descriptive and inferential results as well as hypothesis testing for each research question. The results showed that using peer feedback alone or applying both peer and teacher feedback significantly improved students' overall writing performance, especially when compared to teacher feedback, with the combined use of teacher and peer feedback having the greatest impact on high school students' writing performance. Based on Collaborative Learning Theory and Activity Theory, students also benefit more from the combined use of teacher feedback and peer feedback to improve their analytical writing performance, particularly in the areas of idea / content, organization, vocabulary, grammar, and cohesion / coherence. In addition, based on peer feedback training, EG2 students' writing proficiency improved significantly in the areas of idea / content, organization, grammar, and cohesion / coherence. In the final chapter, the researcher draws conclusions from the current study, pedagogical implications, and recommendations for future research.

CHAPTER 5

SUMMARY, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 Introduction

The purpose of this thesis is to explore the effectiveness of peer feedback in improving Chinese high school students' writing performance. Guiding the two main theoretical constructs of the current study are Activity Theory by Engeström (1987) and Cooperative Learning Theory by Slavin (1980), this study examined three intact classes - a total of 150 sophomores who studied separately in three different treatment conditions in a Chinese high school, i.e., the control group (CG) used traditional teacher-centered teacher feedback, experimental group 1 (EG1) used peer feedback, and experimental group 2 (EG2) used peer feedback as the primary method of feedback combined with teacher feedback as a supplementary method of feedback. Regarding students' writing performance, the data set was collected based on pre- and post-tests, the factors affecting peer feedback on high school students' writing performance were collected by administering questionnaires to EG1 and EG 2. In addition, post-experimental questionnaires were administered to determine user perception of using peer feedback. All data sets were analyzed quantitatively. In the final chapter, the findings of the current study are reported in the following sections.

5.2 Summary

A quasi-experimental study was conducted to fulfill the first research objective and to specifically evaluate: a.) changes in students' overall writing performance induced by the treatment condition of the between-subjects variable after eight peer feedback training and an eight-week intervention, and b.) Changes in students' scores on various aspects of their writing performance after the use of various types of feedback after the intervention.

Results of a short-term quasi-experimental study showed that peer feedback was more effective than traditional teacher feedback in improving students' overall writing performance. Additionally, findings on the long-term side of the equation suggest that the use of both teacher feedback and peer feedback was the most effective instructional method for improving students' overall writing performance in the current quasi-experimental study. The use of peer feedback improves vocabulary and grammar in high school students' English writing, and the use of peer feedback supplemented by teacher feedback, significantly improves high school students' English writing idea / content, organization, vocabulary, grammar, and cohesion / coherence. Based on these findings, it can be concluded that peer feedback is a useful feedback method that can improve the overall writing performance of Chinese high school students. In addition, the findings provide evidence for a theoretical framework that guide the current research, i.e., Activity Theory by Engeström (1987) and Cooperative Learning Theory by Slavin (1980).

In this study, the implementation of peer feedback proved to be a significant feedback model in improving Chinese high school students' writing performance (i.e., idea / content, organization, vocabulary, grammar, and cohesion / coherence). To be more specific, the combination of teacher feedback and peer feedback was superior to the traditional teacher feedback in the aspects of idea / content , vocabulary, grammar, cohesion / cohesion ($p=0.000$) and organization ($p=0.001$), it is also significantly outperformed peer feedback in the aspects of idea / content ($p=0.003$), organization ($p=0.006$), vocabulary (0.008), grammar (0.001) and cohesion / coherence (0.015). On the other hand, using peer feedback alone is superior to practicing teacher feedback alone in terms of vocabulary ($p=0.021$) and cohesion / coherence (0.010). The findings of current research were in line with previous research claiming that peer feedback has the advantage in improving EFL students' writing performance, such as content, organization and grammar (Hao & Razali, 2022).

After the peer feedback experiment, questionnaires were analyzed for EG1 and EG2 students, and it was concluded that there were five factors affecting the impact of peer feedback on Chinese high school students' writing performance: accountability, communicativeness, utility, self-efficacy, and receptivity. One of the underpinning theories of peer feedback is Cooperative Learning Theory by Slavin (1980), which lays the theoretical and pedagogical foundations of English language teaching and English language learning and writing. Traditional teacher feedback ignores peer interaction, and peer feedback between groups compensates for this disadvantage. Its main form

is in the form of group activities. Within the group members help each other to maximize their own and others' growth and achieve common learning goals. This not only strengthens students' sense of responsibility, but also improves communication skills among them. The main purpose of cooperative learning is to promote teacher-student and student-student interactions, to advocate students' full cooperation in the learning process, and to change from a teacher-centered model to a student-centered and teacher-led model. Peer feedback enables learners to provide more useful information in collaboration, which can more effectively improve learner development (Storch, 2005). Writing peer feedback can enhance learners' positive attitudes toward writing through peer cooperation and assistance (Paulus, 1999).

Cooperative Learning Theory by Slavin (1980) suggests that learning is a process of communicating with peers and that this process is based on socialization. Cooperative learning is one of the ways of teaching and the goal of cooperative learning is to enable students to help each other to learn language and writing successfully through cooperation among peers. In addition, cooperative learning is considered as a way to develop students' reflective skills in the process of foreign language learning. Participants' learning effectiveness and success in group activities as well as sense of achievement are improved to some extent, interpersonal skills are enhanced, and self-confidence and creativity are further improved.

Hirvela's (1999) findings indicate that students learn more efficiently and pragmatically when working in groups on a variety of tasks than when working

individually. In group learning, students of different abilities and levels not only focus on what they have learned but also help their peers to learn through cooperation in learning activities, and to obtain the best learning results, group members should communicate fully with each other to create a successful learning atmosphere. In the process of writing peer feedback, cooperative learning between group members, each member in addition to the other group members essay written feedback at the same time, but also need to communicate and exchange, to pass their own ideas and opinions to other members. To make peer feedback go smoothly, students also need to think about how to communicate effectively and how to fully convey their ideas to each other. In this atmosphere of positive communication, students' own learning, and thinking ability is also improved. In cooperative learning, students not only gain improvement in language knowledge, but also learn how to think and communicate positively in the atmosphere of group cooperation.

In the process of peer assessment of English writing, students evaluate their peers' writing according to the mutual evaluation form, and the teacher takes the role of supervisor and guide. Pointing out the problems of their peers also helps them to reflect on themselves, and discovering the strengths of their peers also helps them to improve their own writing ability. Peer feedback utilizes opportunities for student-to-student learning and collaboration, sharing mistakes in writing and discussing how to improve writing. Students focused on how they could help their peers with their writing, and students who gave help to others felt a stronger sense of pride. At the same time, they

generate their own self-efficacy and strive to become more effective writers.

From the results of the questionnaire, although five influencing factors (accountability, communicativeness, utility, self-efficacy, and receptivity) were derived from the questionnaire, there may be interactions or joint effects among these factors, and thus subsequent multiple regression analysis can help to understand the effects of each factor on writing performance more comprehensively, and to improve the explanatory power and predictive ability of the model. According to the multiple regression analysis, the correlation coefficient R was 0.829, indicating a strong linear relationship between the independent and dependent variables. The model developed explained 68.8% of the variability in writing performance, where accountability, communicativeness, utility, self-efficacy, and receptivity all had a significant positive effect on writing performance. This suggests that these factors play an important role in high school students' writing performance, providing insights into educational practices and interventions.

According to the comparative analysis of the questionnaire, it can be seen that students have positive perception towards peer feedback on English writing. In general, both EG1 (peer feedback) and EG2 (teacher and peer feedback) students have a high perception towards the use of peer feedback, with EG2 students showing higher levels of perception.

According to Activity Theory by Engeström (1987), peer feedback is a social activity characterized by collectivity and cooperation. In this activity, the

subject of feedback (the student) uses a variety of cognitive and socio-cultural tools to act on the object of feedback and ultimately transform the object into a result. However, this process of action is not completely independent and free, but is influenced and constrained by mediators, rules, learning community and division of labor. The implementation of peer and teacher feedback is guided by the Activity Theory by Engeström (1987) of Socio-Cultural Theory, where the surrounding environment and the mindset of the students have an impact on the implementation of feedback. Pre-training enables students to understand the implementation methods and characteristics of the combined feedback approach. Teachers provide examples of implementation and specific grading rules to standardize the rules of feedback implementation, which can guarantee the effective implementation of feedback. Teachers' guidance, in addition to the preliminary stage, also includes the supervision of the feedback process, always keep abreast of the students' feedback trends, understand the difficulties that students may encounter and provide timely solutions. In addition to this, they should also show the feedback results of the excellent feedback groups and provide different feedback ideas and strategies. Feedback activities should be carried out under careful preparation and reasonable arrangements, and the arrangement of feedback activities should not be random. Teachers should draw up training plans in the process of writing training, different topics of writing methods should be classified training, and timely help students to summarize the knowledge gained from the feedback to complete the most important knowledge internalization. If the activities are simply carried out without summarizing and summarizing, in the

long run, students will be perfunctory and lose the sense of acquisition, failing to achieve the desired effect of writing feedback.

According to the questionnaire, although students' perceptions of interest in peer feedback, peer feedback can enhance idea / content and cohesion / coherence are not high, with mean scores of 3.404, 3.435, and 3.413, respectively. 60% of the students in EG1 and EG2 agreed or strongly agreed that peer feedback and its effects, about 66% of the participants agreed or strongly agreed that reading their peers' compositions improves their own organization, approximately 71% of the participants were positive that peer feedback promotes vocabulary, and around 76% of the students believed that peer feedback significantly improves grammar. Therefore, it can be inferred that students perceive peer feedback as useful, and that peer feedback can improve their English writing organization, vocabulary and grammar.

5.3 Implications

5.3.1 Implications for Instructions and Practice

From the perspective of pedagogical practice, the combination of teacher feedback and peer feedback proved to be significantly superior to traditional teacher feedback and the use of peer feedback alone in this study. Furthermore, the combined use of teacher feedback and peer feedback emphasized teacher feedback as a useful adjunct to the implementation of peer feedback aimed at improving EFL students' English writing performance. In terms of the results of the study, there are implications for teachers' instruction, especially in the use of both teacher and peer feedback in the

teaching of English writing.

First of all, teachers should fully play the roles of facilitators, organizers, managers and guides in the feedback process. In the peer feedback session, if there is no effective organization and guidance from the teacher, some students may not participate in the feedback seriously and may talk, messing around, which will make the peer feedback session meaningless. Therefore, teachers should give full play to their roles in this process, guide students to participate seriously in peer feedback, and guide each group leader to play his or her role well. At the same time, teachers can organize group and inter-group feedback, so that students of different groups with high levels can exchange their compositions for feedback to ensure that every student can receive feedback. In addition, teachers should provide some help to students when necessary, especially many students with good level may not get a lot of effective feedback, and teachers should give them guidance from time to time.

Second, teachers should use incentives to guide students to actively participate in peer assessment. Teachers can use internal rewards or external rewards to motivate students and mobilize their enthusiasm for participation. There can also be a point competition between groups. Which group has excellent performance and good feedback can be given extra points, and the teacher can give points to the group with the most points at regular intervals to redeem the points. The teacher can give points to the group with the most points at regular intervals. This form can not only let the group have a sense

of competition, on the other hand, can stimulate and improve students' sense of group cooperation. This form can not only let the group have a sense of competition, on the other hand, it can stimulate and improve students' sense of group cooperation.

Finally, teachers should guide students through the process of giving feedback to build knowledge useful for writing. Guiding the low and middle level students to actively learn from the good learners in the group, and to find a notebook specially for accumulating the useful knowledge in the feedback and memorize it after class. At the same time, after the teacher's feedback, record the useful knowledge as well. In the final summarization and presentation session, students should also record more of the advantages of other people's essays and turn others' advantages into their own knowledge in the future.

This study makes a significant contribution by proposing a structured framework for implementing peer feedback in English writing instruction. The framework consists of five key components derived from the findings: accountability, communicativeness, utility, self-efficacy, and receptivity. Based on this framework, a peer feedback rubric has been developed, which provides clear guidelines for assessing writing quality and structuring peer feedback interactions. Additionally, a teacher training module is proposed to help instructors integrate peer feedback effectively into their writing instruction. This module includes pre-training sessions on peer feedback strategies, structured peer review guidelines, and teacher-led interventions to

ensure high-quality feedback exchanges. These contributions provide practical insights for educators aiming to improve writing instruction through peer feedback and support the development of student-centered learning environments.

In summary, the findings demonstrate that peer feedback is an effective approach to enhancing Chinese high school students' writing performance, particularly when supplemented with teacher feedback. This research not only confirms the effectiveness of peer feedback but also provides a structured implementation guide that can be adapted in EFL classrooms.

5.3.2 Implications for Policy and Curriculum

This study influences the English curriculum and related policies in Chinese high schools. The experimental results of this study may provide insights for educational policies. Policy makers may consider supporting and facilitating the integration of peer feedback in the educational system to promote a more interactive and collaborative learning environment. This may involve updating policies, and clear guidelines could be developed to ensure that peer feedback is recognized as a valuable component of the learning process.

The results of the peer feedback experiment also emphasize the need for teacher training and development. Policy and curriculum developers may consider providing relevant training and development opportunities to help teachers better navigate, manage, and evaluate the peer feedback process. The results of the experiment may offer some insights into disciplinary and

professional standards. Policymakers and educational institutions may consider incorporating the use of peer feedback into discipline and professional standards to ensure that students are supported in developing key competencies.

Peer feedback emphasizes the interdependence of students and motivates them to cooperate and collaborate better. This helps in developing teamwork skills which are beneficial for future career and social life. Through peer feedback, students can receive personalized guidance and advice that helps to meet their learning needs. This can lead to a greater focus on personalized learning in schools.

Peer feedback experiments may enlighten policymakers and educational institutions to integrate technologies and tools to support peer feedback. This may include the adoption of online platforms, apps or other digital tools to optimize the communication and management of peer feedback. Peer feedback as an educational methodology may have a positive impact on the overall education system. It can help drive educational reforms and lead to education policies that are more focused on student engagement and learning experiences.

In conclusion, the introduction of peer feedback in high school English teaching is expected to promote collaboration and cooperation among students, increase motivation and personalize the learning experience. This practice helps teachers optimize teaching methods and materials to improve

the quality of instruction while developing students' assessment and analytical skills. In addition, peer feedback helps develop students' self-directed learning and teamwork skills, which may have a positive impact on high school curricula and policies, and promote educational reforms focusing on student engagement and personalized education.

5.4 Recommendations for Future Research

The current study provides sufficient evidence for this research question by exploring whether the implementation of peer feedback is effective for Chinese high school students through a quasi-experimental study. However, there are some limitations, and in the following sections, the implications of the current findings for future research are discussed in terms of the scope of the survey, the duration of the study, and objectivity.

First of all, the investigation scope of this study is limited. The subjects of this study were three classes of senior two in the First Middle School of Jixi City, Heilongjiang Province, totaling 150 students. Moreover, since the school belongs to the city key high school and the English proficiency of the students is at a higher level among the senior high school students, the subjects of this study could not comprehensively and adequately represent the real situation of senior high school students in all the general high schools. Therefore, how English writing peer feedback is applied in other general high schools needs to be studied on a larger scale.

Second, the research time for this study was limited. Based on the tasks and length of writing instruction in Chinese high schools, this study lasted only one semester, with a total of eight peer feedback training and eight writing peer feedback activities. It is not enough to study the long-term effects of writing peer feedback on students' English writing. Changes in writing ability are a long-term process, so a longer study period and more in-depth peer feedback activities would have more fully reflected the effects of peer feedback on students' writing.

Finally, the study participants may lack specialized knowledge and objectivity. The providers of peer feedback were high school students who may lack in-depth expertise. Therefore, the quality of the feedback may be limited. In addition, students in the study may answer the questionnaires taking into account the presence and attitudes of their teachers and peers, and thus may not be able to fully give their truest thoughts. Therefore, it will have an impact on the experimental results of this study. Meanwhile, in the process of peer feedback, the researcher found that students in the middle and high level groups speak more and are better at giving effective feedback, so how to provide relevant peer feedback guidance to students of different levels in the group needs to be further studied.

Future research can be done to further investigate the following issues, such as: (1) How to optimize the peer feedback of high school students' English writing, and how to make full use of the students' initiative in addition to the teacher's guidance. (2) How to provide more targeted guidance to students of

different writing levels in writing peer feedback activities. (3) Integrating writing peer feedback with technology, including the use of online platforms, apps, or other digital tools to optimize the communication and management of peer feedback.



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APPENDICES

Appendix A

Pre-Test Writing 2021 China National College Entrance Examination English Writing Exam

Written expression (25 points)

Please write a practical essay according to the situation set by the title, as follows:

An English speech contest will be held in your school. You are invited to enter by writing a speech entitled Be Smart Online Learners, the things you need to write about include:

Note:

1. Please analyze your strengths and weaknesses;
2. Make suggestions based on personal experience;
3. Real place names, school names, and personal names must not appear in the text;
4. The number of words about 200-250 words.

Appendix B

Post-Test Writing 2020 China National College Entrance Examination English Writing Exam

Written expression (25 points)

Please write a practical essay according to the situation set by the title, as follows:

Last Weekend, you and your classmates took part in a picking activity. Please write an essay on My Weekend for the class English corner to introduce this activity, the things you need to write about include:

Note:

1. Farm conditions;
2. The picking process;
3. Personal feelings;
4. Real place names, school names, and personal names must not appear in the text;
5. The number of words about 200-250 words.

Appendix C

EFL Writing Performance Grading Criteria and Grading Rubric

Chinese college entrance examination English composition grading standards

1. The total score is 25 points, according to 5 grades to points.
2. When grading, first according to the content and language of the article to determine the level, and then to measure the level of the requirements to determine or adjust the level, and finally to score.
3. For words less than 200 and more than 250, subtract 2 points from the total score.
4. The main points to be noted in the grading are: the main points of the content, the rationality of the organization of the article, the quantity and accuracy of the applied vocabulary and grammatical structure, and the coherence of the context.
5. Spelling and punctuation are aspects of language accuracy and should be assessed on the basis of their impact on communication.
6. If the poor writing, to affect communication, will be reduced by a grade.

Very Good (21-25 points)	Cover all ideas / contents of the topic.	(5 / 5)
	The article has good organization.	(5 / 5)
	A lot of grammar and vocabulary are used.	(5 / 5)
	Some grammar or vocabulary mistakes, but due to the use of more complex structure or higher vocabulary; has a strong language skills.	(5 / 5)
	The effective use of cohesion / coherence elements between sentences makes the whole text compact and achieves the expected writing goal	(5 / 5)
Good (16-20 points)	It misses one or two sub-priorities, but it covers all the ideas / contents.	(4 / 5)
	The article's organization is less reasonable, but broadly consistent	(4 / 5)
	The applied grammar and vocabulary can meet the requirements of the task.	(4 / 5)
	Grammar or vocabulary is generally accurate, some errors are mainly due to trying more complex structure or higher vocabulary.	(4 / 5)
	The use of simple cohesion / coherence elements between sentences makes the full text compact.	(4 / 5)
Not Bad (11-15 points)	You missed a few things, but you covered all the ideas / contents.	(3 / 5)
	The organization is not so rational, but it does not affect understanding.	(3 / 5)
	The applied grammar and vocabulary can meet the requirements of the task.	(3 / 5)
	There are some grammar or vocabulary errors, but does not affect understanding.	(3 / 5)
	Use simple cohesion / coherence elements between sentences to make the whole text coherent.	(3 / 5)

Worse (6-10 points)	Missing or not clearly described some of the main idea / content, wrote some irrelevant content.	(2 / 5)
	The organization is not so rational and it does affect the understanding of the content of the writing.	(2 / 5)
	The grammar structure is monotonous, the vocabulary knowledge is limited.	(2 / 5)
	There are some grammar or vocabulary errors, affecting the understanding of the content of the writing.	(2 / 5)
	Less use of cohesion / coherence elements between sentences, the content of the lack of coherence.	(2 / 5)
Bad (1-5 points)	Obvious omission of the main idea / content, wrote some irrelevant content, the reason may be not understand the test requirements.	(1 / 5)
	The organization is very unreasonable, affect the understanding of the writing.	(1 / 5)
	The grammar structure is monotonous, the vocabulary knowledge is limited.	(1 / 5)
	More grammar or vocabulary errors, affect the understanding of the content of the writing.	(1 / 5)
	Lack of cohesion / coherence elements between sentences, the content is not coherent.	(1 / 5)
0 point	Failed to convey any information to the reader; too little to judge; written content is irrelevant to the requirements or can not be read clearly.	

Cited from *Chinese college entrance examination scoring system*

Appendix D

Peer Feedback Evaluation Form

Peer Feedback Evaluation Form		
Writer:	evaluator:	
Item	Standard for Evaluation	Comments
Content	Is the essay relevant to the situation given in the title? Does it cover all the points in the writing requirements? Is the topic clear? Is the point clear? And is there enough detail?	
Organization	Is the structure of the article clear and logical? Is the transition between paragraphs and sentences natural and smooth? Is the paragraph division appropriate?	
Grammar	Are there various sentence patterns? Are they grammatically correct? Is it possible to mix simple and complex sentences?	
Vocabulary	Is the vocabulary sufficient? Can you use some advanced words or expressions fluently and accurately?	
Coherence	Are the sentences coherent and cohesive? Are the paragraphs coherent and cohesive? Are the passages coherent and cohesive?	

Cited from *Zhu's peer feedback form* (Zhu, 2013)

Appendix E

Peer Feedback Orientation Scale

Hello everyone,

Thank you for taking the precious time to fill in the following questionnaire on factors influencing peer feedback. There are five options for each of the following statements. Please choose one that suits your situation and tick it. (A=Totally Disagree; B=Disagree; C=Neutral; D=Agree; E=Totally Agree)

1.	As a peer-feedback provider, I feel responsible to give feedback that helps the other person.	A	B	C	D	E
2.	As a peer-feedback provider, I feel responsible for the peer-feedback I give.	A	B	C	D	E
3.	As a peer-feedback receiver, I always take in all the feedback I receive to see if it's of any use to me.	A	B	C	D	E
4.	As a peer-feedback provider, I want that the other person benefits from my feedback.	A	B	C	D	E
5.	As a peer-feedback provider, I give feedback in such a way that I would be happy to receive it myself.	A	B	C	D	E
6.	As a peer-feedback provider, I give feedback more objectively when I don't know the receiver.	A	B	C	D	E
7.	As a peer-feedback receiver, it makes me insecure when I get feedback from someone who is very good.	A	B	C	D	E
8.	As a peer-feedback provider, I do my best when I get a grade for giving feedback.	A	B	C	D	E
9.	There must be a balance between positive and negative feedback.	A	B	C	D	E
10.	As a peer-feedback provider, I am more inclined to give feedback when I hear that people appreciate my feedback.	A	B	C	D	E
11.	As a peer-feedback receiver, I accept peer-feedback sooner if it is substantiated.	A	B	C	D	E
12.	As a peer-feedback receiver, peer-feedback becomes more useful when I can discuss it.	A	B	C	D	E
13.	As a peer-feedback receiver, I want to know from whom I have received feedback so that I can start the conversation if I didn't understand something.	A	B	C	D	E
14.	As a peer-feedback provider, I have confidence in the peer-feedback process, i.e. I know how to comment and how my comments are reviewed.	A	B	C	D	E
15.	As a peer-feedback provider, I feel that we as students have enough content knowledge to be able to give each other feedback.	A	B	C	D	E
16.	I know how to make the most of peer feedback.	A	B	C	D	E
17.	As a peer-feedback provider, I know how to give peer-feedback.	A	B	C	D	E
18.	A good and safe atmosphere in the group positively influences the peer-feedback process.	A	B	C	D	E
19.	As a peer-feedback receiver, I think that even if someone else has a different point of view, there may still be	A	B	C	D	E

	something valuable in it.					
20.	As a peer-feedback receiver, I accept feedback from everyone, regardless of whether I can get along with the person or not.	A	B	C	D	E
21.	As a peer-feedback receiver, I am open to different points of view and know that there is not always one correct answer.	A	B	C	D	E
22.	As a peer-feedback receiver, I am able to process both positive and negative peer-feedback.	A	B	C	D	E

Cited from *Peer Feedback Orientation Scale* (Kasch, Van Rosmalen, Henderikx, & Kalz, 2022).



Appendix F

Questionnaire on the Use of Peer Feedback in High School English Writing

Hello everyone,

Thank you for taking the precious time to fill in the following questionnaire about the feedback effect of peer writing. This questionnaire is for scientific research and has nothing to do with your academic performance. The personal information involved will be kept confidential for you, please answer each question truthfully, feel free to fill in, do not leave out, each can only choose one item, in the selected items below draw a check mark, thank you for your support and cooperation.

There are five options for each of the following statements. Please choose one that suits your situation and tick it. (A=Completely Disagree; B=Disagree; C=Neutral; D=Agree; E=Strongly Agree)

1.	I am interested in peer feedback as a teaching method	A	B	C	D	E
2.	I like reading other students' English compositions	A	B	C	D	E
3.	I like to let other students read my English composition	A	B	C	D	E
4.	I like to discuss other students' compositions with the group members	A	B	C	D	E
5.	I like to let other students discuss my composition	A	B	C	D	E
6.	I like to comment on other students' compositions.	A	B	C	D	E
7.	I like reading the comments from other students	A	B	C	D	E
8.	Peer feedback helps me feel more motivated to write	A	B	C	D	E
9.	Peer feedback has been very helpful in improving my writing.	A	B	C	D	E
10.	Reading other students' compositions can broaden my horizons	A	B	C	D	E
11.	Reading other students' compositions gives me a lot of inspiration	A	B	C	D	E
12.	The constructive advice given to me by other students was very helpful	A	B	C	D	E
13.	I think peer revision is very important for me to write a good article.	A	B	C	D	E
14.	I think reading my classmates' compositions can stimulate my brainstorming and enrich my writing idea/content.	A	B	C	D	E
15.	I think the comments from my classmates enrich my idea/content.	A	B	C	D	E
16.	I think the students give the assessment of my article can make a clear point of view, the beginning of the point of sharp, the end and the beginning of the same point of view.	A	B	C	D	E
17.	I think peer feedback can make the meaning expressed in English writing be related to each other.	A	B	C	D	E
18.	I think reading my classmates' compositions is helpful to improve my composition organization.	A	B	C	D	E
19.	I think the comments made by my classmates have improved the organization of my composition.	A	B	C	D	E

20.	I think the use of peer feedback in English writing can help students to organize their writing in a compact way.	A	B	C	D	E
21.	I find that using peer feedback can enrich the use of vocabulary.	A	B	C	D	E
22.	I found that peer feedback helped students make fewer spelling mistakes, and more accurate use of case and punctuation.	A	B	C	D	E
23.	I have found that peer feedback makes the collocation of vocabulary more appropriate.	A	B	C	D	E
24.	I found that reading my classmates' compositions inspired me in my own grammatical structure.	A	B	C	D	E
25.	I find that the use of peer feedback can make the text sentences more in line with the norms of grammar (tense, voice, mood, person, subject-predicate, modifier, etc.)	A	B	C	D	E
26.	I have found that peer feedback can make a variety of sentence patterns (simple sentences, compound sentences, complex sentences, etc.)	A	B	C	D	E
27.	I think the use of peer feedback can help peers find out whether the context is coherent naturally.	A	B	C	D	E
28.	I think the use of peer feedback can help students to find out whether the relationship between the various parts of the sentence is clear and coherent, so that the meaning of the sentence is clear and understandable.	A	B	C	D	E
29.	I think peer feedback enables students to use the right connectives in the paragraphs and make the paragraphs coherent.	A	B	C	D	E
30.	I think peer feedback can help students use sentence coherence effectively.	A	B	C	D	E

Cited from *Tusi and Ng (2000) and Shao (2010)*

Appendix G

Cover Letter of the Questionnaire

Hi everyone,

Good day to all of you. I am Zhang Bo, a Ph. D candidate from Faculty of Education, University of Putra Malaysia (UPM).

The survey questionnaire is part of the research that needs to be done for my doctoral thesis. Responses from this form will help illuminate high school students' perception on the usage of peer feedback in China. I appreciate if you can spend about 10-15 minutes to complete this survey.

Rest assured that your anonymity is protected as I do not ask for any personal information or contact details in the questionnaire. Hence, I look forward to honest and unbiased feedback from all of you.

Thank you in advance for your support. If you are interested in the result of my survey, feel free to contact me via email.

Warm regards,
Zhang Bo
Ph. D candidate of TESL,
Faculty of Education,
University of Putra Malaysia.
383730287@qq.com

Appendix H

High School Expert Reviewers' Brief Biodata

The validity of the Peer Feedback Evaluation Form and EFL Writing Performance Grading Criteria and Grading Rubric were established through expert review by three experienced high school teachers from Heilongjiang Province, China. Their brief biodata are as follows:

Teacher A

Gender: Female

Teaching Experience: Over 12 years in high school English education

Qualifications: Master's degree in English Education

Recognition: Awarded "Excellent Teacher" in China

Expertise: English writing instruction and peer feedback assessment

Teacher B

Gender: Female

Teaching Experience: 10 years in high school English education

Qualifications: Bachelor's degree in English with a teaching certification

Recognition: Awarded "Excellent Teacher" in China

Expertise: Curriculum design and English assessment

Teacher C

Gender: Male

Teaching Experience: 15 years in high school English education

Qualifications: Master's degree in Applied Linguistics

Recognition: Recognized as a senior English instructor in the province

Expertise: Writing pedagogy and peer assessment strategies

Appendix I

University Expert Reviewers' Brief Biodata

To ensure the validity of the two questionnaires used in this study, three professors from Harbin Normal University, China, were invited to review their construct and content validity. Their brief biodata are as follows:

Professor A

Gender: Female

Academic Qualification: Ph.D. in TESL (Teaching English as a Second Language)

Current Position: Professor of English Education at Harbin Normal University

Research Interests: Second language acquisition, writing assessment, and peer feedback in English education

Experience: Over 15 years of experience in English language teaching and assessment

Professor B

Gender: Female

Academic Qualification: Ph.D. in TESL

Current Position: Associate Professor of Applied Linguistics at Harbin Normal University

Research Interests: Curriculum design, English writing pedagogy, and assessment methods

Experience: 12 years of experience in teaching and research on language assessment

Professor C

Gender: Female

Academic Qualification: Ph.D. in TESL

Current Position: Professor of English Language Teaching at Harbin Normal University

Research Interests: Peer feedback strategies, discourse analysis, and classroom interaction in EFL settings

Experience: 18 years of experience in English language instruction and academic writing

Appendix J

Table 3.7 Explanation of Total Variance of Factors Affecting Peer Feedback

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.092	36.782	36.782	8.092	36.782	36.782	3.786	17.209	17.209
2	2.989	13.586	50.368	2.989	13.586	50.368	3.649	16.587	33.796
3	2.543	11.558	61.926	2.543	11.558	61.926	3.438	15.628	49.424
4	1.544	7.019	68.945	1.544	7.019	68.945	3.168	14.399	63.823
5	1.293	5.878	74.822	1.293	5.878	74.822	2.420	11.000	74.822
6	.592	2.693	77.516						
7	.571	2.595	80.111						
8	.523	2.379	82.490						
9	.437	1.985	84.475						
10	.385	1.750	86.225						
11	.361	1.639	87.864						
12	.358	1.626	89.490						
13	.326	1.484	90.973						
14	.309	1.404	92.378						
15	.281	1.278	93.656						
16	.272	1.236	94.891						
17	.259	1.175	96.067						
18	.244	1.109	97.175						
19	.186	.846	98.021						
20	.171	.776	98.797						
21	.138	.628	99.425						
22	.126	.575	100.000						

Extraction Method: Principal Component Analysis.

Appendix K

Table 3.8 Orthogonally Rotated Factor Loading Matrices for Factors Influencing Peer Feedback

Rotated Component Matrix^a						
	Component					
	Communicativeness	Accountability	Self_Efficacy	Receptivity	Utility	
Q1	-.006	.834	.018	.028	.008	
Q2	.075	.864	.012	.158	.001	
Q3	.198	.832	.081	.133	.171	
Q4	.132	.790	.245	.081	.157	
Q5	.257	.775	.111	.181	.062	
Q6	.837	.092	.211	.102	.128	
Q7	.802	.212	.247	.001	.160	
Q8	.781	.105	.286	.147	.021	
Q9	.795	.250	.204	-.001	.159	
Q10	.730	.027	.363	.131	.075	
Q11	.227	.049	.150	.237	.828	
Q12	.109	.100	.183	.209	.811	
Q13	.088	.144	.085	.160	.863	
Q14	.409	.059	.718	.038	.190	
Q15	.322	.121	.774	.151	.036	
Q16	.154	.039	.847	.167	.070	
Q17	.322	.064	.738	.133	.079	
Q18	.180	.177	.702	.061	.188	
Q19	.144	.104	.179	.837	.130	
Q20	.080	.081	.153	.871	.121	
Q21	.104	.143	.045	.840	.262	
Q22	-.010	.190	.092	.819	.131	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Appendix L

Table 3.11 Explanatory Table of Total Variance of Student's Perception Factors

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.892	19.641	19.641	5.892	19.641	19.641	4.317	14.391	14.391
2	4.732	15.775	35.415	4.732	15.775	35.415	4.028	13.427	27.818
3	3.059	10.197	45.612	3.059	10.197	45.612	3.162	10.540	38.358
4	2.797	9.325	54.936	2.797	9.325	54.936	2.969	9.897	48.255
5	2.213	7.376	62.313	2.213	7.376	62.313	2.705	9.017	57.272
6	1.904	6.348	68.661	1.904	6.348	68.661	2.644	8.812	66.085
7	1.854	6.180	74.841	1.854	6.180	74.841	2.627	8.756	74.841
8	.783	2.609	77.450						
9	.730	2.434	79.883						
10	.622	2.074	81.958						
11	.596	1.988	83.945						
12	.483	1.610	85.556						
13	.454	1.514	87.069						
14	.419	1.397	88.466						
15	.397	1.325	89.791						
16	.378	1.259	91.050						
17	.348	1.161	92.211						
18	.303	1.009	93.220						
19	.270	.901	94.121						
20	.250	.833	94.954						
21	.224	.745	95.699						
22	.215	.716	96.415						
23	.182	.607	97.022						
24	.173	.577	97.599						
25	.166	.552	98.152						
26	.143	.477	98.629						
27	.124	.415	99.044						
28	.115	.385	99.429						
29	.094	.314	99.743						
30	.077	.257	100.000						

Extraction Method: Principal Component Analysis.

Appendix M

Table 3.12 The Factor Loading Matrix of Students' Perception after Orthogonal Rotation

Rotated Component Matrix^a							
	Component						
	Interest	companion	cohesion	idea	organization	vocabulary	grammar
Q1	.752	.126	.085	.063	.128	-.040	-.045
Q2	.823	.139	.049	.039	.047	-.063	.048
Q3	.717	.166	-.050	-.034	.011	-.008	-.001
Q4	.767	.079	.149	.075	-.068	.079	-.014
Q5	.772	.199	-.062	-.147	.125	.070	.100
Q6	.732	.076	-.076	.053	.080	.234	.015
Q7	.693	.187	-.031	-.154	.334	.071	.000
Q8	.089	.733	.019	-.099	.105	-.075	.091
Q9	-.039	.875	.067	-.160	.067	-.056	-.063
Q10	.161	.803	-.151	-.090	.041	-.076	.123
Q11	.267	.774	-.112	-.056	-.061	.032	.029
Q12	.221	.833	-.075	.017	-.059	.019	-.030
Q13	.287	.743	.017	.008	-.021	-.076	-.096
Q14	.119	-.099	-.031	.818	.110	.193	.032
Q15	-.058	-.049	.015	.854	.074	-.046	.047
Q16	.001	-.090	-.002	.823	.174	.062	.063
Q17	-.078	-.085	.052	.813	.079	-.008	-.047
Q18	.147	-.016	.146	.212	.868	.021	.126
Q19	.199	.050	.009	.171	.891	.066	.074
Q20	.085	.028	.038	.110	.919	.077	.031
Q21	.105	-.142	.155	.143	.001	.888	.069
Q22	.108	-.075	.123	-.019	.074	.901	-.046
Q23	.019	.006	.142	.060	.084	.909	-.055
Q24	.002	.049	.019	-.019	.172	.077	.912
Q25	.019	-.053	.104	.065	.042	-.001	.926
Q26	.043	.060	.110	.043	-.002	-.111	.898
Q27	.025	.005	.868	.088	-.085	.123	.063
Q28	-.012	-.088	.872	-.014	.125	.041	.145
Q29	.048	.007	.877	-.016	.046	.111	-.053
Q30	.004	-.111	.824	-.015	.092	.132	.098

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Appendix N

Request for Permission to Conduct the Study

REQUEST FOR PERMISSION TO CONDUCT STUDY

Date: 17/08/2023

Mr. Wang Haijun

Headmaster of Jixi First Middle School

Address: Changzheng Street, Xishan Street, Jiguan New District, Jixi City, Heilongjiang Province, China

RE: Request for Permission to Conduct Research Study

Dear Mr. Wang,

I'm writing to request permission to conduct a research study at your school. I am currently enrolled in the PhD program at Universiti Putra Malaysia, and I am in the process of writing my PhD's thesis. The study is entitled "Effectiveness of Peer Feedback on Chinese EFL High School Students' English Writing Performance".

I hope that the school administration will allow me to recruit 150 sophomore students from the school to complete two questionnaires about peer feedback, and participate in a 8-week intervention program. If approval is granted, student participants will complete the questionnaires after treatment.

Your approval to conduct this study will be greatly appreciated. I will follow up with a telephone call next week and would be happy to answer any questions. You may contact me at my email address: 383730287@qq.com.

If you agree, please kindly sign below and returned the signed form via email.

Sincerely yours,

Zhang Bo, PhD student at Universiti Putra Malaysia

Approved by:

Wang
Headmaster

print your name and title here

王海军

Signature

22/8/2023

Date

BIODATA OF STUDENT

Zhang Bo, was born in Jixi city, Hei Longjiang Province, China, on the 10th November, 1993. She graduated with a Bachelor Degree in English major from Harbin Normal University in 2016. She continued to pursue her Master Degree in Teaching English as a Second Language at Harbin Normal University in 2016. In March 2021, she pursued a Ph.D. in TESL at Universiti Putra Malaysia. Her main areas of interest are applying peer feedback to high school English writing instruction and exploring high school students' perceptions of peer feedback.

LIST OF PUBLICATIONS

Published

Zhang, B., Razali, A.B., & Ismail, L. (2024). The effect of teacher-guided peer feedback on English writing performance of Chinese EFL high school students. *International Journal of Academic Research in Progressive Education and Development*, 13(4), 185-197.

Zhang, B., Razali, A.B., & Ismail, L. (2025). Research on cultivating paths of English writing ability of high school students based on peer feedback from the Correction Network. *Edelweiss Applied Science and Technology*, 9(2), pp. 1156–1167.



