The Effectiveness of Corrective Feedback in Enhancing EFL Learner Writing Performance

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Abstract:

This paper explores the effectiveness of corrective feedback from English teachers on EFL learners' English writing performance. To be precise, it will explain how teacher feedback affects EFL learners' English grammar learning through English writing. The research adopts a questionnaire survey and tests to have an empirical study. The experiment lasts for ten weeks with one hundred participants who are divided into two groups (one with corrective feedback and the other does not), thus comparing the differences of their English grammar via English writing performances to extract the effectiveness of TSCA and CBI-based model in English writing teaching. The research found that corrective feedback based on TSCA and CBI could effectively improve grammar learning of students in English writing performances. The innovative point of this paper lies in improving the accuracy of grammar rule usage by students and their writing levels via a teacher's corrective feedback. It will provide a new model for grammar learning for EFL students. This study combines TSCA and CBI to explore the effectiveness of corrective feedback on the grammar learning of students in English writing performances. It will supplement the limitations of current studies and remedy the possible drawbacks of TSCA, thus providing a new teaching mode for English grammar learning.

Keywords: English writing, corrective feedback, direct feedback, indirect feedback.

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纠正反馈对提高英语学习者写作成绩的有效性

摘要：

本文探讨了英语教师的纠正反馈对英语学习者英语写作表现的有效性。准确地说，它将解释教师反馈如何通过英语写作影响英语学习者的英语语法学习。本研究采用问卷调查和测试的方式进行实证研究。实验持续十周，将一百名参与者分为两组（一组有纠正反馈，另一组没有），通过英语写作表现来比较他们的英语语法差异，以提取基于TSCA和工业商业银行的有效性英语写作教学模式。研究发现，基于TSCA和工业商业银行的纠正反馈可以有效提高学生英语写作表现的语法学习。本文的创新点在于通过教师的纠正反馈来提高学生语法规则使用的准确性和写作水平。它将为英语学生提供一种新的语法学习模式。本研究结合TSCA和工业商业银行来探讨纠正反馈对学生英语写作表演中语法学习的有效性。它将补充现有研究的局限性，弥补TSCA可能存在的缺陷，从而为英语语法学习提供一种新的教学模式。

关键词：英语写作，纠正反馈，直接反馈，间接反馈。

1. Introduction

1.1. Research Background

It is well-known that grammar is essential to English study, especially for English writing. However, the grammar issue in EFL students' English writing is serious, especially among students who do not major in English. Therefore, it is necessary to pay attention to grammar problems in English writing. Factors causing grammar problems in English writing are diverse, while most studies focus on the factors from students rather than teacher assessments and their effects on students' grammar learning in English writing. By collecting related studies on this topic, the existing studies have found that students did not receive effective feedback or assessment from teachers, which contributes to students' failure or inability to improve their writing performances. Effective and corrective assessment and feedback from teachers have been proven to be beneficial to the improvement of students' grammar learning in English writing performances.

The above proves the importance of assessment feedback to English grammar learning in English writing. Assessment feedback could be high- and low-efficient. It is obvious that assessment feedback with high efficiency will improve students' grammar learning. However, high-efficient assessment feedback needs to overcome the drawbacks of both man-made and computer-mediated assessments.

Low-efficient assessment feedback is reflected in superficial comments without specifying errors made by students or giving any clues or labels in students' English writings. Reasons causing such low-efficient assessment feedback may be the large class sizes that lead to the heavy workload of teachers due to the teacher-student collaborative assessment (TSCA) in integrated language classrooms and teachers' lack of knowledge about the feedback manners preferred by and effective to students.

TSCA is an innovative approach to teaching and learning assessment based on POA and is particularly effective for large class sizes. TSCA helps teachers maximize effectiveness by providing immediate and effective feedback using a combination of assessment models.

TSCA has been argued to be an effective way to promote the efficiency of assessment feedback. However, in practice, even after adopting TSCA, students' grammar learning still faces another challenge from inaccurate feedback. This is especially true when looking at computer-mediated assessment. Besides computer-mediated assessment, TSCA also has many other forms of assessment FB, which could relieve the inaccuracy of computer-mediated assessment. However, man-made assessment feedback could also be inaccurate. The assessments given by teachers and computers are traditional FB. Even though the effects of combining both machine and man-made assessments could be better than traditional pure linguistic feedback, students may still feel confused because they have no idea about the mistakes they have made and how to correct these mistakes and overcome these difficulties. In such a situation, CBI could be a way of helping these problems faced by students in grammar learning of English writing.

Leaver and Stryker (1989) see CBI as a way of

shifting the focus of instruction from language learning to subject knowledge to improve language proficiency.

CBI is a concept of second or foreign language teaching and learning, which emphasizes that the input to students should not be limited to the syllabus in order to enable students to acquire some expertise in the process of language acquisition. CBI is also referred to as 'subject-based tutoring', 'content-based instruction', 'content-based instruction' and 'content-based teaching tools'. "CBI is considered to be one of the most conducive teaching models for the development of complex human resources in the new context, and its theoretical core lies in the integration of a disciplinary theory with language teaching in order to enhance the efficiency of language teaching.

The CBI concept integrates grammatical knowledge into the knowledge curriculum in a holistic manner, providing students with authentic contexts. Students' grammatical problems are solved instantly through the teacher's guidance in the real language environment, and their mistakes in oral practice can be corrected by the teacher instantly, thus improving the grammar learning effects of the English language.

To further explore the effectiveness of CBI concepts in promoting students' grammar learning, an increasing number of scholars have conducted empirical studies on the possibility of replacing traditional explicit grammar teaching methods with implicit grammar teaching using CBI concepts in teaching practice in view of the TSCA.

The former studies have explored the application of CBI to English teaching and the development of students' language skills. However, there are fewer studies on the improvement of the accuracy of TSCA based on the application of CBI. Thus, this study will supplement the research on the accuracy of TSCA-based English classrooms supported by the feedback manner of CBI.

1.2. Research Significance

This study based on the analysis of the collected data and information may work in pushing forward the development of effective teacher-student collaborative assessment and the cultivation of autonomy in students' English writing. In addition, this research can enrich the theoretical resources of the combination of TSCA and CBI in improving writing capability as well as expand the scope of the research on university students' English writing capability.

The practical significance of this study is to stimulate a collaborative learning environment to address current and urgent problems in English writing programs, improve student writing competency among EFL non-English major university students in Qiqihar University.

Looking at the references of hybrid corrective feedback, it is found that most of the studies apply the quantitative research approach, which remains the major research method (Yamashita, 2021). The methodology significance of this study lies in that it plans to collect and analyze data through a mixed method design. The origin of collected data in this research is from questionnaires, interviews, and tests.

2. Methodology

2.1. Identification

2.1.1. The Concept of TSCA

TSCA is better because it can highlight the key points of assessment. During the TSCA process, students are instructed on how to find error points in the passage and correct them. Through repeated practice and assessment taking place, students' ability to process authentic language material will be improved. Students' insights, perspectives, and thinking can also be continually broadened in the process; thus, TSCA contributes to students' all-round development. Second, peer assessment and self-assessment can stimulate students' interests. The TSCA process covers a variety of assessment methods, enriching the form of teaching and learning in the classroom, which will help motivate students to learn the language. Peer assessment allows students to deepen their interaction with their peers and helps them develop good social skills and teamwork. Under the professional guidance of the teacher, students develop and master the skills of self-assessment, which will help them to develop their independence (Haiyang & Wenbo, 2022). Third, TSCA combined 'learning' and 'assessment'. The core concept of TSCA is to break down the boundaries between 'learning' and 'assessment'; TSCA enables students to learn from the assessment process, which allows language learning to be deepened. Fourth, TSCA has high applicability in ESL classroom learning. As an innovative approach to assessment, the TSCA concepts and procedures are highly adaptable. In addition to writing assessment, TSCA can be used for written and oral assessments. In writing assessments, TSCA can replace the traditional mode of assessment and compensate for the time-

consuming and inefficient disadvantages of traditional assessment methods. Overall, TSCA is an effective way to improve students' writing, stimulate a positive attitude toward learning, and even promote a balanced development of the whole student.

2.1.2. The Concept of Corrective Feedback

In the second language acquisition, feedback refers to the information for learners to correct the interlanguage. This feedback can be positive or negative information. According to Lightbown (2000), positive information refers to information that conforms to the grammar of the target language. Negative information refers to direct or indirect information that expresses what is not acceptable by the target language. Through corrective feedback, negative information indicates that learners used the target language incorrectly.

Corrective feedback can be oral and written. Oral corrective feedback refers to the teacher's timely correction of students' mistakes in a general classroom environment. Written corrective feedback refers to the teacher's written guidance to students in the non-classroom environment. In language teaching, especially in English writing teaching, written corrective feedback is widely used. Therefore, the corrective feedback studied in this paper belongs to the written corrective feedback in English writing teaching.

According to Ferris (1994, 1999, 2006), written corrective feedback can be divided into direct and indirect. Direct feedback is also called explicit feedback, which not only clears up the mistakes made by students but also provides the right form of target language.

Direct corrective feedback usually has two modes: one is to provide right forms rather than understanding the reasons causing mistake; another is to provide right forms of target language with explanation. Indirect feedback is also called implicit feedback, which means teachers giving some wrong clues to use different strategies for students to correct rather than offering the right form of words of phrases and structure of the target language. To summarize, direct feedback of corrective feedback refers to the teacher's provision of accurate language form and structure near the linguistic mistakes of students in writing practice, such as moving the unnecessary words and phrases, inserting the missed words or phrases, and so on.

Indirect corrective feedback refers to the teacher's clues about the linguistic mistakes made by learners, such as providing meta-language explanations, circling the mistakes, recording mistake quantity in the blank, using symbols to tell students the place and types of mistakes they have made, and so on. Being different from the direct form of corrective feedback, in indirect corrective feedback, teachers do not directly provide accurate language forms to students, they just intend to stimulate students' attention to the mistakes they have made and thus correct these mistakes by themselves.

Indirect corrective feedback mainly refers to circling and labeling mistakes for arousing students' attention. Direct corrective feedback mainly refers to the teacher's direct point-out of mistakes in students' English writing. The research intends to explore the effectiveness of direct corrective feedback and indirect corrective feedback with circle of mistakes and annotation, specific feedback on writing contents from direct corrective feedback and general feedback through indirect manner.

Scholars have studied different types of corrective feedback. Corrective feedback in English writing can be divided into different types according to different standards: conversational and written corrective feedback according to different modes; positive and negative corrective feedback according to feedback contents. According to the mode of corrective feedback, there are direct and indirect modes. According to feedback focus forms, there are content corrective feedback and form corrective feedback. Form feedback also includes focus and nonfocus corrective feedback.

In this research, the authors mainly study written corrective feedback in direct and indirect manners.

2.1.3. The Concept of CBI (Content-Based Instruction)

CBI is an approach to language teaching that emphasizes that content should be based on what students are expected to acquire, rather than on a language syllabus, and incorporates knowledgeable topics, content, and topics of interest to students in order to improve both subject and language knowledge (Yan, 2021). CBI is a model of teaching that integrates language theory with language practice. The pedagogical philosophy of this model replaces the focus from the form of language to the use of language meaning, thus reducing students' learning anxiety and

achieving the goal of developing and improving language skills while learning language knowledge (Zou, 2019).

2.2. Screening

Truscott (1996, 1999) thinks that written corrective feedback does not improve the accuracy of learners' writing. Ellis et al. (2008) and Ferris (1994, 1999, 2006) conducted empirical studies and found that corrective feedback is effective in EFL learners' English writing; and the effectiveness of corrective feedback differs due to different forms of corrective feedback. These studies are empirical but have many limitations in experimental design, such as no control groups. Ferris (1994, 1999, 2006) designed control group as a reference, while the study results were based on the comparison between the rate of correctness before and after revising the original writing rather than the correctness rate of the target language structure in the original writing and the new writing through corrective feedback. As a result, the effectiveness of corrective feedback on the English writing performances of EFL learners in the new discourse context is not confirmed.

Scholars who support the effectiveness of indirect corrective feedback, such as Ferris and Helt (2000), argue that indirect corrective feedback guides students to participate in the learning and problem solution process to foster reflection and is beneficial to the enhancement of long-term language acquisition. Some scholars also think that direct corrective feedback is more beneficial to learners who may fail to understand the meaning of symbols provided by teachers through indirect feedback, and direct corrective feedback can solve this confusion. Besides, direct corrective feedback can help learners to solve some complicated problems easily, such as the syntax structure and use of proverbs.

By analyzing previous literature on each assessment, it shows that each has its own strengths and weaknesses and may be able to compensate for each other. There is no substitute for teacher feedback, as it is more emotionally accessible to students than other forms of feedback. Therefore, peer assessment, self-assessment, and automated computer assessment cannot be separated from teacher leadership and training. While teacher feedback is effective, teachers have limited capacity to provide detailed feedback assessments for each student in large classes. This disadvantage can be remedied by combining teacher assessment with peer assessment, self-assessment, and automated computer

assessment. Other assessment methods can be made more effective in the classroom with clear instructions, instruction, and supervision from the teacher. The empirical studies described above show that the use of a combined assessment model is more effective than the use of a single assessment model. Based on these findings, the research base has been laid for developing TSCA. There is no denying that TSCA is a new trend.

Teaching English grammar in the CBI model can enhance high school students' motivation and interest in learning grammar and can help students to better understand and apply English grammar. In addition, English grammar teaching under the CBI model can also help high school students improve their grammar performance and general English proficiency. The concept of CBI was first introduced in the 1960s and 1970s, and the main foreign researchers were Leaver and Stryker (1989), Brinton et al. (1989), Mohan (1986), Kasper (1994, 1997), and Chumpavan (2001). The earliest research on the content of CBI in China was by Wang (1994), who theoretically explored the possibility of applying the CBI teaching model in foreign language teaching in China. The concept of CBI has attracted a great deal of attention from academics, and many scholars have conducted research on CBI-related content, including Lee (2002), Cai (2002), Yu and Han (2003). The main research direction of these scholars is to integrate the concept of CBI into special-purpose English or bilingual teaching. Chinese scholars have first focused on language teaching and the development of students' language skills with the application of CBI in higher education (Gao, 2009). Gao (2009) provides support for the positive effects of CBI on students' language learning.

2.3. Eligibility

ESL writing in local contexts, writing theories that influence classroom instruction, TSCA, content-based instruction, and traits of struggling ESL learners and writers are covered in this chapter.

Research and previous literature have confirmed that teaching writing is a difficult task. Writing is complex because it involves problem-solving and developing strategies to achieve writing goals, which is a cognitively demanding process (Liberty & Conderman, 2018). Writing instruction in ESL classrooms in China has previously been found to be pragmatic, with a strong emphasis on language components such as grammar and the idea that writing is a procedural skill.

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Understanding the theories that have shaped the writing process and the strategies used in it is necessary for developing a successful module.

It can be concluded from the information gathering and discussion that low English proficiency learners' or writers' needs needed to be addressed to overcome the difficulties they encountered when it came to writing in English. In motivating students to write in various contexts, strategy instruction and self-regulation techniques are effective. Previous studies did, however, highlight the dearth of qualitative investigation into the participants' experiences. The abundance of prior research and literature on EFL writing and strategy instruction in various contexts, particularly China, emphasizes the need for a writing-appropriate and strategy-based intervention or instructional module that teachers could use to direct and assist China EFL writers in developing their writing abilities.

2.4. Data Extraction and Analysis

SPSS software is used to perform statistical analysis of the students' performance. To investigate whether students paid attention to corrective feedback and their attitudes toward it, the questionnaire mainly has four questions, which are different for each experimental group. During the statistical analysis, the frequency of each group in choosing the question options and the proportion between the groups were recorded. The effective questionnaire recovery rate is 100%.

3. Research Design

3.1. Background

3.1.1. Samples

Research subjects are EFL learners from college. These learners are English majors from three natural classes. Most of them have more than six years' English study. The three classes are divided into three groups. Group one receives direct corrective feedback, group two receives indirect corrective feedback, and group three is the control group without any corrective feedback.

Within three months, the research adopts the pre-test, post-test, and delayed post-test to compare the English writing performances represented by the accuracy of using past tense and past perfect tense of EFL learners. There were three groups with 100 students. All research subjects participated in the questionnaire survey, pre- and timely tests after one week, and delayed post-test after ten weeks.

3.1.2. Selection of the Participants

The sample for this study is the students of Qiqihar University, which is a more focused sample and may have a low generalization. Second, the time constraint resulted in a short experimental period, which may have led to shortcomings in the findings. In addition, there is currently a lack of existing research on the effects of combining TSCA and CBI on the writing ability of EFL students. More scholars discussed the validity of TSCA or CBI alone. Therefore, there may be a situation where the research cannot be validated.

The student samples in this research are English learners with middle levels; the non-real English environment from external sources has little impact on the students' ability to correct grammar mistakes on their own. Therefore, direct corrective feedback to students is easier to pay attention to the wrong expression and its gap with target language expression, especially complicated mistakes in grammar, the use of idioms, word selection, and so on. Compared with direct corrective feedback, indirect corrective feedback in Group 2 showed a lower improvement in writing performance compared with the control group, which had no feedback. Group 2 with indirect corrective feedback has gained significant progress. As the research has adopted mother language to provide indirect corrective feedback on students' English writing, it avoids students' difficulty in failing to understand feedback made by grammar terms and symbols, and thus greatly decreases bad factors in operating the effectiveness of indirect corrective feedback on students' English writing performances.

3.1.3. Levels of Proficiency

Table 1 is the descriptive statistics of the total sample on the level of proficiency of the three groups.

Table 1. Sample descriptive statistics

Group	No.	Pre-test		Timely post-test		Delayed post-test	
		Mean	Std. D.	Mean	Std. D.	Mean	Std. D.
Group1	35	54.91	6.06	74.69	5.16	73.97	5.53
Group2	32	54.38	5.48	68.78	5.85	67.22	4.70
Group3	33	52.64	4.78	52.61	4.94	53.27	4.94
Total	100	53.99	5.51	65.83	10.90	64.95	10.06

Through the above table, it can be seen that the accuracy rate of students in using past tense and past perfection tense is not high, this shows that most students have not master the use of English past tense and past perfection tense. Thus, the participants could be samples of the research.

The test of the target grammar structure covers the right use of past and past perfect tenses. The reason why the research selects the two tenses in English writing performance of EFL learners is that most EFL learners dealt with them and know the basic concepts of the two tenses. Besides, these two tenses are frequently used in oral English, English reading, and English writing. The two tenses are quite different from those in Chinese and brought barriers for many EFL learners, and the mistake-making rate of the two tenses is very high in English writing.

3.2. Research Objectives

To fill the gap, the objective of the current study is to investigate the effectiveness of applying a CBI strategy to promote students' grammar learning in/based on TSCA.

Specifically, the objectives of the research are as follows:

First, the difficulties concerning students' grammar learning will be identified and discussed through questionnaire.

Second, the strengths and limitations of TSCA for grammar learning will be identified in the literature review.

Third, the effectiveness of CBI in promoting grammar learning in TSCA will be analyzed by statistics collected via questionnaires and interviews.

3.3. Research Process

The research has six stages. At the first stage, the three groups had a pre-test. At the second stage, different corrective feedbacks were provided according to different groups in the experiment, and the control group had no corrective feedback. After one week, the pre-test is returned. At the third stage, the three groups had a delayed post-test. At the fourth stage, a timely post-test was returned to students after one week. The experimental groups marked mistakes and corrected them according to feedback from the teacher. At the fifth stage, after ten weeks, the three groups of the experiment had the delayed post-test, which was not communicated to the students. This action avoided

affecting the scores of students while reviewing the former feedback or target language structure. At the sixth stage, the authors collected experimental and questionnaire data to perform related analyses according to the research objects.

The difficulty levels of the three tests were the same, and the data were calculated by proportion. The blank filling belonged to objective questions with 15 items; each question scored 2 points and accounted for 30% of the total scores. Translation from Chinese to English accounted for 30% of the test scores, and its scores were calculated by the accuracy of grammar rule application. Writing accounts for 40% with the calculation of the proportion of accurately using target grammar. Writing elements such as contents and structure and rhetoric were excluded.
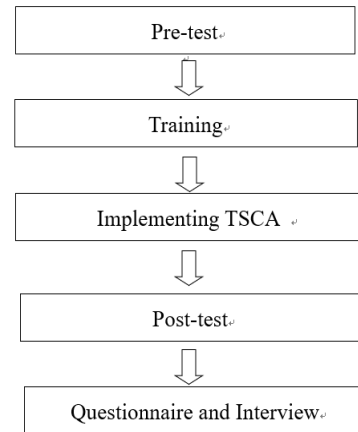

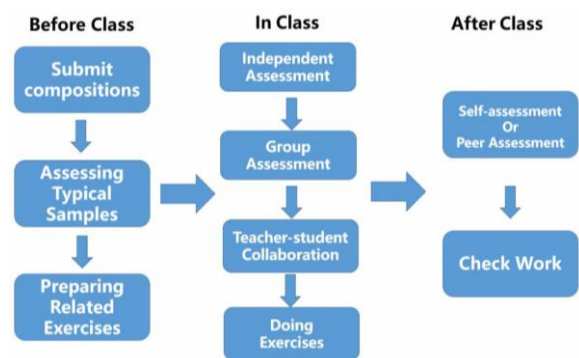Figure 1. Flowchart of the research methodology
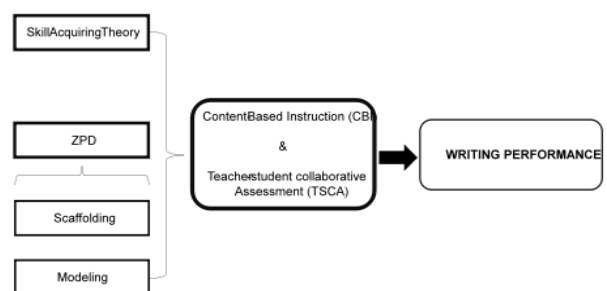

Figure 2. Assessment procedure

Figure 3. Writing performance development and assessment

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4. Results

4.1. Questionnaire

Question 1: Can you understand the corrective feedback given by teacher English writing?

Table 2. Corrective feedback on English writing

Options	Frequency	Intra-group proportion	Total proportion
	Group 1/Group 2/Group 3	Group 1/Group 2/Group 3	
Totally understand	12/18/6	34%/56%/18%	36%
Basically understand	23/14/25	66%/44%/76%	62%
Cannot understand	0/0/2	0%/0%/6%	2%

According to Table 2, all the 67 students from Groups 1 and 2, regardless of receiving direct and indirect corrective feedback, basically understood the corrective feedback provided by teachers in the experiment. As the control group (Group 3) did not receive any feedback on English writing, for the same question, 18% of its students chose the option of "totally understand", another 76% of them chose "basically understand".

Question 2: How do you handle the parts of corrective feedback that are not understandable?

Table 3. Handling corrective feedback

Options	Frequency	Intra-group proportion
	Indirect corrective feedback (Group 2)	
Searching instructions to have self-correction	18	56%
Asking help from the teacher	3	9%
Asking help from classmates	9	28%
Ignore	2	6%

As shown in Table 3, after receiving indirect corrective feedback from teachers, nearly 56% of the students from the group with indirect corrective feedback (Group 2) chose to correct mistakes on their own, 28% chose to ask for help from classmates, and only 9% chose to ask for help from the teacher.

Table 4. Preference in corrective feedback manners

Options	Frequency	Intra-group proportion	Total proportion
	Group1/Group2/ Group 3	Group 1/Group 2/Group 3	
Direct	11/12/8	20%/16%/33%	23%
Indirect	25/26/22	71%/81%/67%	73%
No feedback	3/1/0	9%/3%/0%	4%

As shown in Table 4, for the preference of students in corrective feedback manners, in the three groups, nearly 60% of the students select the indirect corrective feedback, and 16% to 33% of the students from the three groups select direct corrective feedback. Three students from Groups 1 and 2 chose no corrective feedback, and two students from Group 1 chose no feedback.

4.2. Test

The test scoring is based on objective scoring, and the accuracy is calculated by the proportion of using the target grammar structure correctly with exclusion of other assessment elements and statistical analysis of the pre-, timely post-, and delayed post-test of the three groups.

Table 5. Descriptive statistics of the pre-test scores of the three groups

	Number	Mean/std. d.	Mean of total score/std. d.
Group 1	35	7.234/2.296	7.170/2.065
Group 2	33	7.701/1.660	6.780/1.957
Control group	32	7.148/1,753	6.940/1.662
Total	100	7.361/1.903	6.960/1.873

The above table shows that the mean of language mistakes of the control group and experimental group (Groups 1 and 2) is 7.361, with std. d. of 1.903. The mean of comprehensive scores is 6.960, with std. d. of 1.873. This shows that the students in the experiment made many mistakes in the English language forms, and the writing score is not ideal.

Table 6. One-factor ANOVA of mistakes in language forms among the three groups

Dependant variable	Variance source	Sum of squares	Freedom	Mean square	F	P
Mistake quantity	Inter-group	3.1888	2	1.594	0.431	0.652
	Intra-group	188.749	51	3.701		
	Sum	191.937	53			
Comprehensive scores	Inter-group	1.370	2	0.685	0.189	0.828
	Intra-group	184.556	51	3.619		
	Sum	185.926	53			

According to the mistake quantity of the three groups in English writing, the p values of comprehensive scores of the three groups are 0.652, 0.828, which are more than 0.05. This shows that the English writing levels of the students from the three groups are similar with comparability. The different writing performances of the three groups were stimulated due to different corrective feedback forms.

Table 7. Paired sample t-test for the language mistakes among the three groups

No.	Allocation differences					T	F	p
	Mean deviation	St. D.	Std. D.	Bottom	Up			
Group 1 mistakes	3.437	0.859	0.203	3.010	3.864	16.974	17	0.000
Scores	-2.889	1.323	0.312	-3.547	-2.231	-9.261	17	0.000
Group 2 mistakes	2.287	0.631	0.149	1.973	2.601	15.373	17	0.000
Scores	-2.722	1.179	0.278	-3.308	-2.136	9.800	17	0.000
Group 3 mistakes	0.219	0.499	0.228	-0.029	0.467	1.862	17	0.080
Scores	-0.556	2.833	0.429	-1.462	0.351	-1.294	17	0.213

The mean of language form mistakes in Group 1 (with direct corrective feedback) is 3.437, and mean deviation of comprehensive score is -2.889. The 95% confidence interval of mean deviation is not zero; besides the significant rate of t-test is 0.000, which is much smaller than 0.05. This shows that the English writing of group 1 with direct corrective feedback has made great progress.

The mean of the language form mistake made by the students from Group 2 with indirect corrective feedback is 0.287, and the mean of comprehensive scores increased by 2.722; the 95% confidence interval of the mean of comprehensive scores was not zero, and the t-test significance rate is 0.000, which is smaller than 0.05. Therefore, the English writing of students from Group 2 with indirect corrective feedback gained significant progress.

The mean deviation of the control group with no feedback is 0.219; the standard deviation of the gap is 0.499; the 95% confidence interval is zero. Besides, the significance rate of the t-test is 0.080, which is more than 0.05. This shows that the means of language form mistakes in the pre- and posttest are the same. Besides, the significance rate of the t-test for comprehensive scores is 0.213, which is more than 0.05; this shows that the comprehensive quality rate of the control group has no significant improvement.

Table 8. One-factor ANOVA of mistakes in language forms among the three groups in the post-test

Dependant variable	Variance source	Sum of squares	freedom	Mean square	F	P
Mistake quantity	Inter-group	3.1888	2	1.594	0.431	0.652
	Intra-group	188.749	51	3.701		
	Sum	191.937	53			
Comprehensive scores	Inter-group	1.370	2	0.685	0.189	0.828
	Intra-group	184.556	51	3.619		
	Sum	185.926	53			

The above table shows that the significance level of mistake quantity and comprehensive scores among the three groups in the post-test reach 0.000 and 0.005, respectively; this shows that different forms of corrective feedback have significant effects on students' English writing performances. In other words, the mean of language form mistakes and comprehensive scores of the two groups from the experimental group had significant differences.

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Table 9. Pre-test one-way variance analysis

	Sum of squares	df	Mean Square	F	p
Between the groups	95.111	2	47.555	1.584	0.210
Within a group	2911.879	97	30.019		
Total	3006.990	99			

Table 10. Timely post-test one-way variance analysis

	Sum of squares	df	Mean Square	F	p
Between the groups	9015.220	2	4507.610	159.176	0.000
Within a group	2746.890	97	28.318		
Total	11762.110	99			

The variance analysis of the timely post-test shows that F(2.99) is 159.176, and the p value is 0.000, which is smaller than 0.05. This shows that after three different feedback forms, the three groups have significant differences in English writing performances.

Table 11. Timely post-test

Group No.	Group No.	Mean Deviation	Std. D.	Sig.	Bottom (95%)	Up (95%)
Group 1	2	4.90446	1.30156	0.001	1.6687	8.1402
	3	22.07965	1.29121	0.000	18.8696	25.2897
Group 2	1	-4.90446	1.30156	0.001	-8.1402	-1.6687
	3	17.17519	1.32026	0.000	12.8930	20.4574
Group 3	1	-22.07965	1.29121	0.000	-25.2897	-18.8696
	2	-17.17519	1.32026	0.000	-20.4574	-13.8930

Note: The mean deviation is 0.05.

The timely post-test shows significant differences among the three groups, and the p = 0.000 is smaller than 0.05.

Table 12. Delayed post-test

Group No.	Group No.	Mean Deviation	Std. D.	Sig.	Bottom (95%)	Up (95%)
Group 1	2	6.75268	1.24342	0.000	3.6615	9.8439
	3	20.69870	1.23354	0.000	7.6321	23.7653
Group 2	1	-6.75268	1.24342	0.000	-9.8439	-3.6615
	3	13.94602	1.26129	0.000	10.8104	17.0816
Group 3	1	-20.69870	1.23354	0.000	-23.7653	-17.6321
	2	-13.94602	1.26129	0.000	-17.08164	-10.8104

Note: The mean deviation significance is 0.05.

The delayed post-test shows significant differences among the three groups, with P = 0.000 < 0.05.

Table 13. T-test for three tests of the three groups

Group		T	Freedom	P
Group 1	Pre-test-timely post-test	-22.911	34	0.000
	Timely post-test-delayed post-test	2.018	34	0.052
Group 2	Pre-test-timely post-test	-13.449	31	0.000
	Timely post-test-delayed post-test	1.852	31	0.074
Group 3	Pre-test-timely post-test	0.057	32	0.955
	Timely post-test-delayed post-test	-1.043	32	0.305

The allocated T value shows significant difference between the pre-test and timely post-test of direct and indirect corrective feedback, respectively, with p = 0.000 < 0.05, while there are no significant differences between timely and delayed post-tests of the two groups (the p value of direct corrective feedback is 0.052, which is more than 0.05; the p value of indirect corrective feedback is 0.74 > 0.05). The control group (group three) has no significant differences between the pre- and timely post-test) (pre- and timely post-test p values are 0.955, which is more than 0.05; the p value of the timely and delayed post-tests is 0.305, which is

more than 0.05).

5. Discussion

5.1. Questionnaire

As for the first question of whether corrective feedback could be effective for the English performances of students in using past and past perfect tenses accurately, through the above statistics, the research finds that in the pre test, there are no significant differences in the experimental group (Groups 1 and 2) and control group (Group 3). However, after the corrective feedback experiment in English writing, the scores of the timely and delayed post-tests show significant differences between the experimental and control groups. Besides, the scores of the experimental groups are higher than the control group.

As for the question of whether the effectiveness of different forms of corrective feedback on students' English writing performance is different, the sum-of-square analysis shows that the timely post-test between Groups 1 (with direct corrective feedback) and 2 (with indirect corrective feedback) has a significant difference. After ten weeks, the delayed post-test between the two groups in the experimental group still shows significant difference, and the scores of the timely and delayed post-tests of Group 1 (with direct corrective feedback) are higher than those of Group 2 (with indirect corrective feedback). This shows that the effectiveness of direct corrective feedback is better than that of indirect corrective feedback.

As for question three, the attitudes of different students toward corrective feedback, the experimental results show that in terms of improving the accuracy of grammar use, direct corrective feedback is superior to indirect corrective feedback. However, from the results of the questionnaire, indirect corrective feedback could provide a better understanding of the teachers' correction in their English writings. This indicates that the specific meta-language explanation could help students to comprehend the roots of their mistakes. Besides, from the intra-group proportion, most students from the control group (Group 3 without any feedback) can basically understand the feedback from teachers in daily teaching; only individual students cannot understand the teacher's feedback. This shows that in daily English teaching, the teacher's feedback may be vague and not clear enough and thus confuses students in English study.

As for how to handle corrective feedback from teachers in English writing, most students from Group 2 (with indirect corrective feedback) select to look for references and instruction to solve the correction by themselves. Part of the students incline to ask for help from classmates to finish self-correction. As for whom to ask for help, students incline to ask their classmates rather than their teachers. This may be correlated with students' understanding of corrective feedback. Some of them may take corrective feedback from the teacher as negative information, treat it as a criticism, and thus be unwilling to ask help from the teacher with regard to correction of their writings.

As for the preferences of students in corrective feedback manners, most students hope teachers will provide clues to self-correction. From the perspective of students' subjective willingness, with regard to the grammar use in English writing, they hope teachers will provide the related explanations. However, individual students from Groups 1 and 2 in the experimental group chose not to receive feedback; this may be correlated with the excessive quantity of feedback in decreasing their English learning motives and self-confidence in English study. Hence, this enlightens that teachers should not use simple or single corrective feedback alone, they should try to consider subjective demands from students to give related corrective feedback accordingly, and try to satisfy students' expectations, and thus improve their enthusiasm in English writing study.

As for how teachers handle writing mistakes such as grammar mistakes in English writing, most students hope teachers will correct most mistakes made by them. This shows that students have high expectations about corrective feedback provided by teachers while they do not expect teachers to correct all mistakes for them. This means that students still hope to find problems in their English writing through autonomous learning and thus achieve accuracy in writing.

Besides, individuals from Group 1 (with direct corrective feedback) hope that the teacher will give no feedback on grammar mistakes they have made, hoping that the teacher will pay more attention to the contents and ideas of the writing. If so, English teachers should pay attention to students' demands in English study and avoid providing corrective feedback that is against the students' expectations and has a negative effect on their English study.

The questionnaire results conform to the experimental results of the research by Ellis et al. (2008) and Yichen (2022). However, this result disagrees with that by Ferris (2006), who conducted a study on the effectiveness of corrective feedback for EFL learners. Chinese students lack an English language environment; they possess more English learning experience based on the grammar knowledge and understand the grammar while lacking practical experience in using this knowledge. Unlike indirect corrective feedback, direct corrective feedback facilitates learners' paying more attention to the grammar usage rather than the meta-language clues that are not correlated to the context of the English language study.

5.2. Tests

The English writing scores of the control group are the same, while the scores of Group 1 with direct corrective feedback and Group 2 with indirect corrective feedback from the experimental group show a rising trend. Besides, the rise of scores in Group 1 with direct corrective feedback is higher than that in Group 2 with indirect corrective feedback. This shows that English teachers provide direct corrective feedback on the writing contents.

Direct corrective feedback facilitates learners to make comparisons between themselves and the new expression of others. This process easily stimulates students' attention to the gap between their interlanguage and target language and thus forms the necessary condition for English acquisition. According to Schmidt's (1994) attention hypothesis, not all input has the same value; only the input paid attention to by students can be absorbed and comprehended.

The research has proved that both direct and indirect corrective feedback could improve the accuracy of students' English expression in English writing. However, the indirect corrective feedback effectiveness in improving the accuracy of students' language application is not as good as that of direct corrective feedback; this could be explained by the language levels of students. Group 2 with indirect corrective feedback has made relatively complicated mistakes such as the mistake in clause. Teachers just give clues while revising the writing. Even though the mistake is pointed out by the teacher, due to limited English level, students

from Group 2 cannot correct it on their own.

The results show that the English writing performances of students from the experimental group (Groups 1 and 2) have improved comprehensively. This result also provides evidence of the effectiveness of the teacher's corrective feedback on writing content. Compared with the control group, which received no feedback, experimental group students' English writings showed great progress. This shows the positive attitude of the students toward the corrective feedback provided by the English teachers. Students not only correct their original writing but also apply the feedback to the repeated writing.

The allocated t-test shows that the post-test scores of Groups 1 and 2 from the experimental group are higher than the scores in pre-test. In addition, after the ten weeks' experiment, the delayed post-test scores of the two groups decreased a little while they were still higher than the pre-test scores. For the control group (Group 3), which receives no feedback, the three test times have no significant differences. This illustrates that indirect and direct corrective feedback given by teachers is effective to improve students' English writing performances in using past and past perfect tenses. With teacher's corrective feedback, the scores of delayed post-test between the two groups out of the experimental group are compared without significant difference; this shows that the effectiveness of corrective feedback from teachers on students' English writing is not temporary or incidental but prolonged.

5.3. Summary of the Results

The comparative analysis on results of the delayed and timely post-tests and pre-test show that the scores of the timely post-test and delayed-test of the experimental group are significantly higher than the pre-test. After the experiment, the writing scores of the control group showed no significant changes. This illustrates that corrective feedback could effectively improve the accuracy of English writing in tense use. The questionnaire also shows that students have positive attitudes toward the teacher's corrective feedback. The research further states that the corrective feedback is effective for students' English writing. Besides, direct corrective feedback has more significant effects on students' English writing performance than indirect corrective feedback.

The research used an empirical study method to prove that the written corrective feedback provided by teachers with regard to the English language forms in English writing is effective in improving the accuracy of students' English language expression. The research also proves that direct corrective feedback is more beneficial to students' long-term development than indirect corrective feedback.

Written corrective feedback has the merit of attracting students' attention. Once students have paid attention to the teacher's feedback, they will try hard to correct the mistakes. Therefore, effective corrective feedback can help students further master English grammar knowledge. Corrective feedback can give clues to students with regard to how to correct their mistakes in English writing and free them from making similar mistakes. From another point, students usually cannot find their mistakes themselves; even if they find their mistakes, they have no idea how to correct them. At this time, it is necessary to have a third person who could highlight the mistake. Besides, constant feedback from others can generate a conditional reflex of the mistake-makers to avoid making the same mistakes. Corrective feedback is also effective for English study.

Unlike written corrective feedback, oral corrective feedback is direct and time-saving. Written corrective feedback is more significant. Adopting written form to correct students' mistakes in English writing rather than pointing out their mistakes in front of the whole class protects and maintains their self-dignity. Besides, teachers' written corrective feedback can help students to master the grammar.

Indirect corrective feedback is also welcomed in the second language writing. Ferris (1994, 1999, 2006) stated that the most welcomed feedback manner for learners is to mark under the mistake with related description, and direct corrective feedback is secondary.

Therefore, indirect corrective feedback is worth exploring. As Lalande (1982) says, indirect corrective feedback provides opportunities for problem solution and checking the leakage with pertinence, makes students use their own ability to correct writing mistakes, and thus fosters the development of interlanguage.

The research results conform to those of studies by Ferris (1994, 1999, 2006), who holds a positive viewpoint that corrective feedback is good for improving students' English writing performances. The results of the research prove the limitations of Truscott's

(1996, 1999) study, which finds corrective feedback ineffective.

However, excessive corrective feedback from teachers to students may shock down students' self-confidence. Hence, while providing corrective feedback on students' English writing, English teachers should master the degree of corrective feedback. Related studies have shown that when teachers have provided written corrective feedback on the methods of using past tense, students' accuracy in using this grammar rule is improved. However, corrective feedback provided by teachers in practical English writing teaching is hard to apply. For this problem, English teachers should combine oral and written corrective feedback to highlight grammar knowledge that is easily misused by students. In this way, combining different methods of providing corrective feedback saves time and energy to spare more time on English teaching contents.

6. Conclusion

6.1. Major Findings

We conducted an empirical experiment on the effectiveness of corrective feedback for EFL learners' English writing performance by taking the past and past perfect tense application as a case study. It is proved that corrective feedback improves the accuracy of using the target language structures. For students, direct corrective feedback has better effects than indirect corrective feedback on English writing performance. This enlightens teachers to provide direct corrective feedback to improve students' grammar accuracy and target language structure use in English writing. Teachers should not simply provide direct corrective feedback; they should take students' demands into consideration to provide effective feedback in different forms. Besides, teachers should encourage students to discuss feedback on English writing between themselves and with teachers to enhance the feedback effectiveness. This study is significant for the acquisition of English grammar in English teaching and can solve the problem of students' barriers in English study due to the shortage of effective communication between teachers and students.

To summarize, the research has proved the effectiveness of using written corrective feedback to improve students' English writing performance to a certain degree. It also reflects the low efficiency of written corrective feedback provided by teachers to

students in English writing teaching. Hence, the research suggests that English teachers combine cognition characteristics of different students to combine different forms of corrective feedback to correct common grammar mistakes made by students with pertinence. Meanwhile, English teachers should encourage students to effectively use their written corrective feedback to find and correct their writing mistakes in English and improve their English writing and thus its efficiency.

According to the pre-test scores and the types of corrective feedback, students are divided into control and experimental groups (Group 1 with direct corrective feedback and Group 2 with indirect corrective feedback). Students in the whole experiment must revise their writing at least once. The research shows that written corrective feedback received by students significantly improves their language form and structure usage. Compared with indirect corrective feedback, improvement in students' English writing generated by direct corrective feedback is higher. This further proves the positive effectiveness of corrective feedback on EFL learners' English writing forms.

6.2. Limitations

Despite the above achievements of the research, the research results do not mean that teachers should simply give direct corrective feedback on students' English writing without providing indirect corrective feedback. Compared with indirect corrective feedback, direct corrective feedback has better effectiveness in helping students improve their accuracy of using English grammar. As for whether direct corrective feedback has similar effectiveness for other skills in English, further study is needed. Besides, indirect corrective feedback is irreplaceable because it is the important manner of a teacher in providing support and guidance to students in English study and thus facilitates students' perceiving the process of being guided and taught.

Furthermore, the research scope and scale are small and thus cause certain limitations. The research topic could be studied in a wider scope to prove the effectiveness of the research findings. Besides, the target language structure studied in the experiment was learned by students in advance. As for whether the new language skills and knowledge could be enhanced through corrective feedback, in-depth research is

necessary. Besides, the research mainly focuses on the written form of corrective feedback; the oral corrective feedback is not included. Therefore, a comparative study on the effectiveness of oral and written corrective feedback for EFL learners' English writing performance could be a future research direction.

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