

The Influence of Written Corrective Feedback on Students' Learning Engagement in Writing: A Longitudinal Comparative Study of Middle and High School EFL Students in China

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Received: October 14, 2022

Accepted: January 25, 2023

Online Published: February 9, 2023

doi:10.5539/ijel.v13n2p37

URL: <https://doi.org/10.5539/ijel.v13n2p37>

Abstract

In the process of writing, EFL students produce language output, which tests their ability to use language comprehensively. Teacher feedback is an important bridge between learners and teachers, which is the most common and important form of feedback that cannot be replaced. This study aims to explore the effects of teachers' written corrective feedback on students' learning engagement in English writing at different ages from the perspective of students' intrapersonal factors. The data explored in this article are collected by questionnaire from students in a junior and a senior high school both located in Guangzhou. The questionnaire uses the most authoritative method to classify learning engagement into behavioral, cognitive, and affective dimensions. The specific research question is whether there are any differences in learning engagement between the two age groups.

The findings indicate that there are significant differences in the three dimensions of learning engagement between the two age groups. Generally, senior high school students' degree of learning engagement is lower than that of junior high school students. Based on the detailed analysis of the differences in specific learning situations, this paper gives some specific suggestions for English teachers' writing teaching practice.

Keywords: middle school English writing, teacher written corrective feedback, learning engagement

1. Introduction

1.1 Research Background

English is a globally spoken and essential language. It is spoken by one-third of the world's population and is an official language in 45 nations. As a result, in an era of accelerating internationalization, English as an international language is a critical skill for students to master to face the world. And it is taught in China beginning in primary school and has since become a compulsory subject for students.

Listening, speaking, reading, and writing is the four core capacities of language learning. Among them, as a key component of language output, writing has a significant impact on learners' expression, presentation, and performance, and consequently on their level of recognition in communication. Besides, it is the most difficult aspect of language skills for English learners. It's a challenging task for Chinese students because their native tongue has a completely different system than English, and they could not have access to the target language's linguistic context. Therefore, the issue of how to develop pupils' writing skills requires additional attention.

During the process of writing, feedback is an effective tool for teachers and students to communicate with one another. It is the teacher's obligation to encourage students to actively participate in multiple forms of feedback, as well as to foster metacognitive skill development through the feedback process. The assessment of students' final learning outcomes should not be the main aim of assessment, according to the Basic Education Curriculum Reform Outline. Instead, the primary goal of teaching and learning should assist students in developing their metacognitive skills during the assessment, which allows students to develop a deeper knowledge of themselves. Teachers should assist students to pay attention to their learning process by improving their learning abilities throughout the learning process and providing focused feedback advice (Zhang, 2008).

Much scholarly research has been conducted on teacher feedback, which is one of the most common and

authoritative aspects of writing instruction. Teacher feedback is a two-way interactive process that helps students write more effectively while also allowing teachers to understand the realities of their students' learning and balance their teaching. Teachers should thus pay attention not only to students' academic writing performance but also to their internal input, along with how they analyze and improve their problems in response to teacher feedback, thereby contributing to the mutual development of teaching and learning.

1.2 Literature Review

1.2.1 Teacher Written Corrective Feedback

According to Keh (1990), feedback is input from readers who revise a writer's work. Writing feedback is a form of written evaluation information that is used to help students improve their writing abilities. Corrective feedback attempts to increase learners' awareness of their mistakes, lead them toward a state where they can shrink the gap between their errors and the proper forms, and eventually accomplish the task without the help of the teacher (Goh, 2017). At present, corrective feedback is considered a crucial kind of contact between instructors and students in the classroom, which is the key to writing feedback (Lv, 2021).

Depending on the subject of correction, feedback in writing can be divided into teacher feedback, peer feedback, independent feedback, etc. The most common type at the junior and senior levels is teacher corrective feedback. The definition of it was refined in the latter study (Zhang, 2008, p. 11) as: "the message provided to students by teachers, both in verbal and nonverbal forms, aiming to help guide or motivate the learners during the learning process." Therefore, corrective feedback from teachers can be subdivided into oral and written forms of expression. Oral feedback contains two distinct ways, immediate and non-immediate. Teachers would point up learners' errors in oral presentations promptly during immediate feedback, whereas teachers would not correct errors until the completion of the communication during non-immediate feedback. Similarly, written corrective feedback from educators involves both direct and indirect feedback. When students make mistakes in their writing, teachers provide them with immediate comments on how to repair their wording (Hendrickson, 1978). During indirect feedback, teachers simply highlight errors with symbols like underlines and circles rather than informing pupils of the correct form of language.

Mentioned above are definitions of corrective feedback from teachers and the main categories. In this article, there are no specific categories of feedback studied because the detailed types of written corrective feedback are too heterogeneous and do not facilitate data collection and analysis. It simply compares the learning engagement of students of two age groups under the common written corrective feedback from teachers.

1.2.2 Learning Engagement

The term "engagement" was initially used in the workplace to describe a careful and responsible attitude, the amount of time spent at work, and the level of effort put in. Skinner (1993) later incorporated it into the field of educational psychology, which marked a significant movement from one domain to another. Ellis (2008) described engagement in the acquisition of a foreign language as a state of high concentration and participation that is expressed not just at the cognitive level but also at the socio, behavioral, and affective levels.

Despite the existence of many studies related to learning inputs, their understanding is still too abstract. Some indicators are difficult to quantify. As the importance of student engagement in learning has grown in research in other fields, more and more researchers have enriched and expanded the connotation of learning engagement from different dimensions. The researcher Ellis (2010) introduced the three-dimensional framework of behavioral engagement, cognitive engagement, and affective engagement, which is the earliest and most comprehensive learning engagement structure. The degree of effort and academic performance is referred to as behavioral engagement of learning; affective engagement refers to the rich feelings expressed in the process; and cognitive engagement refers to students' perceptions and beliefs about themselves, school, teachers, and classmates. This division has also been agreed upon by many other scholars and is, therefore, the one used in this study.

1.2.3 Research at Home and Aboard

In the domains of foreign language acquisition and English writing, written corrective feedback, often known as error or grammatical correction (Ferris, 2012), has been intensively investigated and highly contested for the past two decades.

In the discussion of the feedback subject, researchers discovered that teacher feedback has a status and role that cannot be substituted by other feedback techniques after comparing and studying various feedback subjects. For instance, Yang Miao (2006) conducted an empirical comparison of teacher and peer feedback in English writing classes and concluded that teacher feedback was more easily accepted. As a result, a significant number of

studies have been undertaken on this topic, including theoretical studies and other sorts of empirical studies.

However, these studies focused primarily on the effectiveness of written corrective feedback and the comparison of different varieties of it. Foreign researchers in the field of second language acquisition have been studying the effectiveness of written corrective feedback since the late 20th century, represented by two of them, Truscott and Ferris. They started a long and heated debate on whether corrective feedback is effective or not. Truscott (1996, 2009) argues that corrective feedback is not only unhelpful but also drains learners' enthusiasm as second language learners receive new language knowledge and consolidate old language knowledge. Ferris (1999) contends that Truscott's conclusion is too radical, saying that error correction is a necessary component of second language writing. Teachers might determine the most effective method of error correction based on their teaching expertise and the characteristics of their pupils. In a follow-up study, it was discovered that the majority of second-language learners desire written corrective feedback from their teachers and acknowledge its good impact on their second-language writing (Ferris, 2007). Although the dispute over grammatical error correction remains unresolved, engagement and collaboration on the subject still permit follow-up studies on various types of written corrective feedback from teachers.

The debate over which type of feedback is superior has proven inconclusive in recent years, highlighting the complexities of corrective feedback. The efficacy of written corrective feedback from teachers has been a hot issue of research both domestic and global, with a growing number of studies confirming it. However, the scholarly focus is increasingly shifting to ways to make written remedial feedback from teachers more useful. This issue points in a fresh direction that should be pursued (Su, 2015). The lack of rigorous consideration of individual learner characteristics in the uptake, processing, and application of written corrective feedback by learners is one noteworthy gap that may be discovered when comparing past studies. Previous studies have contrasted groups of learners who received various forms of written corrective feedback processing, with a few exceptions. Individual reactions to any teaching approach are always present within a group of pupils, as any teacher knows, and these disparities are produced by factors such as prior educational and language background, motivation and attitudes, and external limitations and distractions (Ferris et al., 2013).

Tyler proposed the concept of "time on task" in the 1930s, claiming that the more time a student devoted to learning, the more he or she will gain. Learning engagement research in China began at the turn of the century. Students' learning engagement had a high rate of explanation for learning outcomes, according to Wang Yashuang (2015). In general, people who are more involved in their studies are more likely to succeed. In terms of measuring learning engagement, the Schaufeli team's Utrecht Work Engagement Scale (UWES-S) (2003) is widely utilized in China. The "work" field was transformed into a "learning" field by using this scale. In China, there are few studies on measuring learning engagement, and most researchers have opted to revise foreign scales. Concerning the aforementioned questionnaire, Sun Weiwen (2009) produced a questionnaire on high school students' learning engagement, which included seven dimensions attention, effort, persistence, interest, value, metacognition, strategy usage, and deep strategy use. Then Lv Xiaodong (2021) further adapted this scale to develop a new learning engagement scale to be applied to the study of corrective feedback in English writing for high school students.

Because empirical research on learning engagement is still sparse, learning engagement has only just been integrated into the field of second language education. For instance, Phung (2016) looked at the link between second language task preferences and learning engagement. He discovered that learners were more engaged in their chosen tasks cognitively. In a broad sense, Ellis (2010) has seen that student involvement with corrective feedback, both written and oral, may be looked at from three different angles: emotive, behavioral, and cognitive. The emotional perspective is concerned with how students react to the input. How and whether students revise their texts in response to feedback is the focus of the behavioral approach. The cognitive approach focuses on how students respond to input cognitively. According to Han and Hyland (2015), a student's engagement with written corrective feedback encompasses his or her emotive, behavioral, and cognitive involvement.

Though several topics on learning engagement have been carried out by domestic and international researchers in recent years, only a few have related them together with the teaching and learning of English writing and teacher corrective feedback in the last five years. One researcher has explored college students' engagement with autonomous rather than teacher written corrective feedback (Koltovskaia, 2020). Some of the studies explored the relationship between teacher written corrective feedback and learning engagement only for a single specific group of students. For example, one has investigated lower-proficiency students' engagement with WCF in EFL writing classes (Zheng & Yu, 2018). Another domestic scholar Lv Xiaodong (2021) research object is limited to high school students. Furthermore, there is a dearth of investigation on the variances and changes in student involvement at various ages.

The significance of this study may be shown in a myriad of areas. Firstly, students might feel greater warmth and respect from their professors if they get written teacher feedback that is more in line with their inner needs. This could spark students' desire to write and a willingness to learn. In addition, the experiment's findings will aid front-line English instructors in identifying and differentiating between the hurdles and preferences of middle and high school students in terms of their participation in English writing. In this way, students could get the teachers' assistance which is more appropriate to their age-specific needs. Last but not least, the study could probably aid educational researchers in reflecting on the present state of writing instruction and learning and in better understanding the real educational situation so that they may make realistic recommendations. This article is innovative in that it covers both middle and high school age groups and attempts to compare their differences in several dimensions of the degree of learning engagement. The purpose of this study is to find suitable feedback methods for students with multidimensional intrinsic involvement, as well as to provide teachers with references for selecting appropriate and effective written corrective feedback methods based on the learning realities of students of various ages. This might help maximize students' interest and motivation in writing and make them enjoy writing psychologically. On an academic level, this study may be able to inform and support data for more far-reaching research related to teachers' written corrective feedback and learning engagement.

2. Method

2.1 Research Question

Several research on the association between learners' intrinsic variables and teachers' written corrective feedback have been undertaken in recent decades. Students' preferences for teachers' teaching approaches and students' responses to written corrective feedback have been the topic of previous studies. The research on the effects of written corrective feedback from teachers on second language learners' participation in learning is still in its infancy. To fill the vacuum left by earlier studies, this paper investigates the impacts of teacher feedback while focusing on the analysis of students' personalities in various age groups and adding the component of learning engagement. Therefore, this research may help people understand the psychological mechanisms that drive students' internal engagement. Therefore, the research question of this study is the following:

Are there any differences in the learning engagement of high school and middle school students as a result of teachers' corrective written feedback?

2.2 Participant

Students from a junior high school and a high school in Guangdong Province provided the samples for this investigation. The students are from the key classes of senior two and junior two respectively. Sophomores are chosen because they are familiar with the writing requirements and methods of this age group after one year of practice, and compared with students who are about to graduate, the pressure of the entrance examination has less impact on their learning engagement. There are around forty students in each of the four classes, with approximately equivalent numbers of male and female students. All the participants have a certain level of knowledge of English and have been systematically taught and trained in English writing tasks. The overall sample size is 172, and all participants were informed about the study's substance and goal, and their permission was gained before the survey. The researcher informed students in advance that the questionnaire would be used for research purposes only and would be completed anonymously, so that students could be assured that their answers are as truthful as possible, thus ensuring the reliability of the information provided.

2.3 Research Instrument

The goal of this study is to explore how written corrective feedback from teachers affected students' behavioral, cognitive, and affective engagement. A questionnaire was the primary tool utilized in the research. The questionnaire is adapted from Lv Xiaodong's (2021) High School Students' Learning Engagement Scale and Sun Weiwen's (2009) Middle School Students' Academic Engagement Questionnaire. On the basis of the original dimension division, the author of this study deleted some questions that are not applicable to students of both age groups.

The three dimensions of learning engagement measured by the questionnaire are behavioral, cognitive, and affective. Each dimension is further subdivided into different sub-dimensions. The questions on behavioral engagement were divided into three sections, participation, persistence, and communication. Participation investigates students' degree of involvement in each writing task and how actively they correct their mistakes according to the feedback. Persistence surveys whether students are able to persist in their attempts to understand and address the written feedback despite the difficulties. Communication investigates students' preferences for communicating feedback and whom to seek help from. The cognitive dimension is decomposed into cognitive

and metacognitive strategies, focusing on what cognitive and metacognitive methods students will use during the writing process and react to feedback from instructors. Learning confidence, interest in learning, and value perception of English learning constitute the affective level. Confidence among them refers to whether they have a strong belief that their English skills will be improved after receiving feedback. Interest is about the desire to learn and the expectation of teachers' feedback. Students' appreciation of the usefulness of feedback in enhancing their English writing is the value recognition of English learning.

The questionnaire has only closed-ended questions. A Likert scale is used to assess each question in the survey. 1 means severely disagree, 2 means disagree, 3 means neither agree nor disagree, 4 means agree, and 5 means highly agree. This number signifies a score between 1 and 5 on a scale of 1 to 5. All of the options and questions are favorable. The Appendix A contains the exact questions from the questionnaire.

Table 1. Questionnaire distribution

Dimension	Sub-dimension	Number	Item NO.	Total
Behavioral	participation	2	1, 2	8
	persistence	3	3, 4, 5	
	communication	3	6, 7, 8	
Cognitive	Cognitive strategy	3	9, 10, 11	6
	Metacognitive strategy	3	12, 13, 14	
Affective	Learning confidence	2	15, 16	6
	Learning interest	2	17, 18	
	Value recognition of English learning	2	19, 20	

3. Results

3.1 Statistics and Data Analysis

In this part, the author carries on the summary statistics and the general description of the total data of the research questionnaire.

A total of 172 copies of the study questionnaire were distributed in the four class WeChat groups, with a 100% return rate. The authors used Spss2.0 to analyze the questionnaire data. Because the questionnaire in this study was censored to some extent from others' questionnaires, a reliability and validity analysis was required. Because the dimension division of specific questionnaire questions refers to the existing mature questionnaire, whose reliability has been proved, confirmatory factor analysis is not carried out again in this study. As shown in the figure below, both alpha and KMO values prove that this questionnaire has good reliability as well as validity.

Table 2. Reliability statistics

Dimension	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Total	.949	.950	20
Behavioral engagement	.874	.881	8
Cognitive engagement	.874	.875	6
Affective engagement	.898	.901	6

Table 3. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.931
Bartlett's Test of Sphericity	Approx. Chi-Square	2438.621
	df	190
	Sig.	.000

It can be known by observing Tables 4 and 5, that the value of $p < 0.05$ for high school and junior high school on all three dimensions indicates that there is a significant difference between high school and junior high school in all three dimensions. Due to the significant differences in questionnaire scores between the two age groups, independent sample t-test data would be analyzed hierarchically, first with individual items, then on to sub-dimensions, and finally to the three overall dimensions. Due to the limitation of the length of the article, only a few specific questions with outstanding differences will be selected for analysis. In addition, the

questionnaire's 20 questions are on a five-point Likert scale, with possibilities ranging from 1 (strongly disagree) to 5 (strongly agree). This means that the higher the score the students get, the better their commitment to study.

Table 4. Group statistics

	Age group	N	Mean	Std. Deviation	Std. Error Mean
Behavioral engagement	High school	93	3.8481.68981		.07153
	middle school	79	4.1709.61699		.06942
Cognitive engagement	High school	93	3.6720.74351		.07710
	middle school	79	4.0338.74649		.08399
Affective engagement	High school	93	4.4982.77378		.08024
	middle school	79	4.8924.80110		.09013

Table 5. Independent samples test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Behavioral engagement	1.274	.261	-3.209	170	.002	-.32277	.10059	-.52133	-.12421
			-3.238	169.532	.001	-.32277	.09968	-.51953	-.12600
Cognitive engagement	.001	.977	-3.174	170	.002	-.36171	.11397	-.58669	-.13673
			-3.173	165.318	.002	-.36171	.11401	-.58681	-.13661
Affective engagement	.042	.837	-3.276	170	.001	-.39420	.12033	-.63173	-.15667
			-3.267	163.537	.001	-.39420	.12067	-.63247	-.15592

3.2 Behavioral Engagement in Teacher Written Corrective Feedback

Table 6. Group statistics of behavioral engagement

	Age group	N	Mean	Std. Deviation	Std. Error Mean
Behavioral engagement	high school	93	3.8481	.68981	.07153
	middle school	79	4.1709	.61699	.06942
participation	high school	93	3.9409	.88419	.09169
	middle school	79	4.5253	.72456	.08152
persistence	high school	93	3.9928	.75817	.07862
	middle school	79	4.3418	.71805	.08079
communication	high school	93	3.6416	.72605	.07529
	middle school	79	3.7637	.76078	.08559

Table 7. Independent samples test of behavioral engagement

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Behavioral engagement	1.274	.261	-3.209	170	.002	-.32277	.10059	-.52133	-.12421
			-3.238	169.532	.001	-.32277	.09968	-.51953	-.12600
participation	2.751	.099	-4.688	170	.000	-.58446	.12468	-.83057	-.33834
			-4.764	169.795	.000	-.58446	.12269	-.82664	-.34227
persistence	.020	.889	-3.082	170	.002	-.34894	.11323	-.57246	-.12542
			-3.095	167.970	.002	-.34894	.11273	-.57149	-.12640
communication	.882	.349	-1.076	170	.284	-.12214	.11356	-.34630	.10203
			-1.071	162.776	.286	-.12214	.11399	-.34723	.10296

Student classroom engagement is a requirement for enhancing the quality of writing education; student commitment to writing tasks is a guarantee of better writing abilities, and student communication with a variety

of audiences is an excellent strategy to increase student learning outcomes. The graph shows how the two separate feedback age groups performed in terms of behavioral engagement.

As can be seen from the table above, there is a significant difference ($p < 0.05$) in the overall mean behavioral engagement scores of the students between the high school and junior high school students, with a small difference in the magnitude of Cohen's d value: 0.491. Middle school students scored higher on average than high school students on all three sub-dimensions of participation, persistence, and communication ($p < 0.05$). The difference in the participation sub-dimension was the most significant of the three, representing compared with the other two sub-dimension that middle school students are much more willing to actively participate in English writing tasks and to revise corrective teacher feedback than high school students, according to Q1–Q2. Among the three questions in communication(Q5–Q8), students of both age groups were more likely to communicate the teacher's feedback with their peers, and revising the information independently was the lowest score.

3.3 Cognitive Engagement in Teacher Written Corrective Feedback

Table 8. Group statistics of cognitive engagement

	Age group	N	Mean	Std. Deviation	Std. Error Mean
Cognitive Engagement	high school	93	3.6720	.74351	.07710
	middle school	79	4.0338	.74649	.08399
metacognition	high school	93	3.5412	.90211	.09354
	middle school	79	3.9873	.87126	.09802
cognition	high school	93	3.8029	.70922	.07354
	middle school	79	4.0802	.73033	.08217

Table 9. Independent samples test of cognitive engagement

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Cognitive Engagement	.001	.977	-3.174	170	.002	-.36171	.11397	-.58669	-.13673
			-3.173	165.318	.002	-.36171	.11401	-.58681	-.13661
metacognition	.057	.812	-3.283	170	.001	-.44612	.13588	-.71436	-.17789
			-3.292	167.194	.001	-.44612	.13550	-.71363	-.17862
cognition	.000	.989	-2.521	170	.013	-.27730	.11001	-.49446	-.06014
			-2.515	163.867	.013	-.27730	.11027	-.49504	-.05956

The employment of cognitive strategies has a common function in learners' language mastering and transformation on the level of cognitive engagement. It is linked to a person's ability to communicate in a foreign language. And when a student uses metacognitive strategies, which include setting and adjusting learning goals, choosing learning methods, and evaluating and reflecting on learning outcomes, is strongly linked to English learning success.

The cognitive dimension and its two sub-dimensions, metacognitive strategies and cognitive strategies, are distinct based on the graphical data ($p < 0.05$). Students of different grades consistently showed the lowest mean value in the dimension of cognitive engagement. As with the behavioral dimension, junior high school students are also more engaged in the cognitive dimension than senior high school students. Among them, the difference in metacognitive strategy level is the most obvious one, which indicates that Middle school students are more active in using metacognitive strategies. On the metacognitive level of making a learning plan for improving English writing, all students maintained a relatively negative self-evaluation (Q9). At the level of cognitive strategy, the association between old and new knowledge differed greatly between the two age groups, with an average value of more than 0.4 (Q13). The score of all students on Q14 is the lowest in this sub-dimension, which represents the situation in that students think they have made low-level language mistakes.

3.4 Affective Engagement in Teacher Written Corrective Feedback

Table 10. Group statistics of affective engagement

	Age group	N	Mean	Std. Deviation	Std. Error Mean
Affective Engagement	high school	93	4.4982	.77378	.08024
	middle school	79	4.8924	.80110	.09013
confidence	high school	93	4.0215	.68728	.07127
	middle school	79	4.3038	.69068	.07771
interest	high school	93	3.7527	.80967	.08396
	middle school	79	4.2278	.79581	.08954
value	high school	93	3.8871	.81136	.08413
	middle school	79	4.2658	.80398	.09045

Table 11. Independent samples test of affective engagement

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Affective Engagement	.042	.837	-3.276	170	.001	-.39420	.12033	-.63173	-.15667
confidence	1.336	.249	-3.267	163.537	.001	-.39420	.12067	-.63247	-.15592
interest	.036	.849	-2.678	170	.008	-.28229	.10540	-.49035	-.07424
			-2.677	165.268	.008	-.28229	.10544	-.49047	-.07411
value	.123	.726	-3.866	170	.000	-.47516	.12292	-.71780	-.23252
			-3.871	166.400	.000	-.47516	.12274	-.71749	-.23283
			-3.063	170	.003	-.37873	.12363	-.62277	-.13469
			-3.066	166.002	.003	-.37873	.12353	-.62263	-.13483

The confidence of learning is the assurance for students to achieve their writing goals through their power; interest is the main motivator for students to accomplish their learning tasks, and the recognition of the value of feedback is the faith support for students to form constant good learning habits at the level of affective engagement. Here are the results of two feedback groups in terms of affective engagement.

By analyzing the data, students of different grades consistently expressed the highest mean value in the dimension of emotional involvement. At the same time, we can discover that there are also significant differences between the two age groups on the affective dimension and its three sub-dimensions. The most prominent of these is in the area of interest, with high school students having a more negative attitude towards corrective feedback. In terms of interest dimension, according to the data of Q18, the mean value of senior high school students is 0.578 lower than that of junior high school students, indicating that it is more difficult for them to feel relaxed and happy in the process of error correction. In the score of question 19, the average score of the students is lower than 4, which means that the students' cognition of the value of teacher feedback is low, especially in the influence of feedback on students' liking for writing.

4. Discussion

4.1 Major Findings

This study aimed to explore the impact of teachers' written corrective feedback on students' engagement in learning. Students' engagement in learning is reflected in three main areas: behavioral engagement, cognitive engagement, and affective engagement. Through the data analysis of the questionnaire survey, the author mainly found the following conclusion. There are significant differences in learning engagement between high school students and middle school students in the face of teachers' written corrective feedback. The difference is reflected in all three dimensions and eight sub-dimensions, and the situation of junior middle school students is more optimistic than that of senior high school students. Fortunately, on the whole, the average sub-dimension of the questionnaire is more than the middle numerical 3, indicating that students of both ages still maintain a positive attitude in the face of written corrective feedback from teachers.

The influence factor that causes this result may be multifaceted. The first factor we need to consider is that the academic pressure and burden of high school might be much greater than that of junior high school, so it has a

more obvious negative impact on the writing learning engagement of high school students. With a lot of homework pressure, the time and energy that high school students can devote to English writing are compressed. It is possible that learning burnout may occur after long-term writing practice, leading to a gradual decrease in learning input. Another possibility is that differences in the size of the sample between the two age groups during the study. Since the sample size of the senior high school group was 14 more than that of the junior high school group, and the total number of questionnaire samples was smaller, the score of the senior high school group might be closer to the neutral option with a score of 3.

4.2 Implication

Based on the results of the data analysis on the behavioral dimension, teachers need to give greater attention to how to establish good communication channels for feedback assistance. The majority of students are in agreement in the survey that rather than relying solely on themselves, they were more willing to improve their writing errors with the help of their teachers or peers. Peer feedback is the most popular method, and the advantage for students in communicating with their peers is that they can seek help easily and efficiently. However, this does not mean that peer feedback is recommended instead of teacher feedback because there is no substitute for the accuracy and authority of teacher feedback. Teachers can use peer feedback among students as a supplementary form, which is also in line with the current trend of cooperative learning. As a result, teachers should offer additional feedback and communication to students, as well as time and opportunities for students to seek writing advice from others in the class.

Meanwhile, to improve the inferiority of high school students in the willingness to participate in writing. It is also necessary to improve and innovate writing teaching methods. Based on textbook unit scenarios, writing topics close to students' real life may help students improve their interest in writing. In addition, since writing skills should be developed in an environment rich in a particular language and culture, teachers should add more students' access to information. Teachers can widen students' eyes by selecting suitable foreign language magazines and books, film and television materials, online application software, and other forms.

The more prominent problems at the cognitive level were reflected in the application of students' metacognitive strategies. Students' self-evaluations were not consistent between the two age groups, mainly regarding the development of a writing learning plan and the summarization of effective error correction methods. The reason for the difference may be related to the higher difficulty of the writing task in high school, where the difficulty of error correction increases compared to the writing task in junior high school, so the use of metacognitive strategies is more complex and difficult. Thus, teachers should focus not only on teaching writing knowledge but also on gaining ground in independent learning skills and the ability to use learning strategies. Therefore, high school students with lower mean scores may need more guidance and assistance from teachers in this area, such as guiding students to assign appropriate writing study plans and having students develop the habit of using error books to summarize the writing problems that have occurred.

On the other hand, it is more difficult for high school students to make connections between new and old language knowledge in terms of cognitive strategies. The reason may be attributed to the fast learning progress of high school students, the large amount of input of new knowledge, and the lack of time to establish a connection with the old knowledge. Therefore, high school English teachers should pay special attention to providing students with knowledge summary and review in daily teaching to help them deeper their memory. At the same time, students in both age groups agreed that low-level language errors would occur in their writing. Therefore, basic grammatical and lexical knowledge consolidation is necessary during writing teaching.

The data from the affective level showed that high school students were more depressed during the correction process of re-writing than middle school students and less interested in feedback from teachers. This finding reminds high school English teachers to pay attention to students' emotional factors when giving corrective feedback, and perhaps a more gentle approach to written corrective feedback could help improve this. For example, using more friendly symbols and words to point out errors in students' compositions. In addition, developing students' correct self-perception and thus building self-confidence may also improve the situation. Students should realize that mistakes are normal and not shameful for learners, but rather an opportunity to improve themselves. And let students understand that mistakes can be corrected through continuous practice, so as to prevent negative feelings of self-denial.

On the whole, due to the significant difference between the two age groups, it is reminded that middle school teachers should pay more attention to the changes in personal internal factors brought by the growth of students' age and the changes in the external environment when facing students. And according to this constantly explore and adjust to the reality of the situation and the needs of students writing teaching methods.

4.3 Limitations

Due to the influence of other complex variables and various objective factors, there are still some shortcomings in this study. The number of people in the middle and high school groups was not the same, which may have had some slight impact on the overall data results. However, to ensure the sample size and the integrity of the samples of students of different levels in the same class, the number of answer papers in individual classes cannot be eliminated.

The questionnaire was distributed in online form, and some students may choose randomly to complete the questionnaire quickly rather than carefully. If the offline paper questionnaire is used to collect information within a limited time and supervised by researchers, the results may better reflect the students' real situation.

The total sample size is not sufficient due to the limited selection channels of student samples. In addition, the chosen high school is above average among many high schools in Guangzhou, while the junior high school is below average in the academic performance of students in the same region. Although the classes surveyed are all key classes, there are still some differences that exist.

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Appendix A

Questionnaire

1. I will actively participate in every English writing task
2. I will actively correct errors after receiving written feedback from the teacher
3. I will try harder when I encounter difficulties in the process of correcting errors
4. I can ensure that I can concentrate on correcting mistakes within a certain period of time without being easily disturbed by the outside world.
5. When I cannot understand the teacher’s feedback, I will try again and again until I can understand it.
6. I prefer to communicate with my peers in the face of teacher feedback.
7. I prefer to communicate with teachers in the face of teacher feedback
8. I prefer to revise independently in the face of teachers’ feedback
9. I will make a study plan to improve my writing skills.
10. I will evaluate the effectiveness of my composition and summarize effective ways to correct mistakes.
11. I will check my own composition for errors before submitting it
12. I can examine the essay topic well and do not deviate from the topic.
13. I will consider the connection between old and new language knowledge when correcting mistakes.
14. I basically do not make general low-level language mistakes
15. I believe that I can understand the teacher’s feedback well
16. I believe my English writing skills will improve
17. I am always curious about and look forward to the content of the teacher’s feedback
18. I feel relaxed and happy in the process of error correction
19. I enjoy writing more because of the teacher’s written feedback
20. I think teacher feedback is necessary to improve my English writing

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