



A Study on the English Writing Teaching of TEM-4 Based on the Pigai Platform

Lijie Liu*, Jun Tang*, Xiaojing Dong and Xiaohui Tan
Inner Mongolia Honder College of Arts and Sciences, Hohhot, China

Email: 18811322698@163.com, kkkdddsss@163.com

Abstract: Feedback from the teacher has long been a key component of the instructional process in conventional pedagogy of English writing. Receiving comments and revising students' writing in response to it is an efficient technique to boost their writing abilities. Given the current situation, it is challenging for teachers to provide timely and detailed feedback to every student. With the development of technology, the area of automated writing assessment systems offers a fresh approach to the instruction of English writing, which are faster at scoring from more specific criteria than teachers. The Pigai platform is currently one of China's most popular automatic evaluation systems. Hence, this study, which uses two classes as its research subjects, intends to explore its effectiveness in English writing for the Test for English Majors Level 4 by applying a questionnaire, interview, and data analysis of the scores of the pre-test and post-test. The findings indicate that incorporating feedback from the Pigai platform into the teaching of English writing for TEM-4 is viable since it significantly improves students' writing skills, motivation, and self-efficacy when compared to the instructor's feedback. Through this study, the author hopes to contribute to the teaching and learning of English writing and to the advancement of automated writing evaluation systems.

Keywords: writing feedback, TEM-4 writing, Pigai platform, effectiveness

Introduction

A solid foundation in English is crucial for English-major students to understand English news, movies, articles, and the cultural background behind them. English proficiency is nothing more than listening, speaking, reading, writing, and translating, among which writing is deemed to be the hardest one for students to master. However, the traditional teaching of English writing has shortcomings in that it is not easy for the teachers to polish every composition while they are amide a tight schedule curriculum^[1]. Timely detailed feedback can enable students to identify their writing errors in vocabulary, grammar, and thinking so that they can accumulate sufficient writing experience. Due to the advantages manifested by the automated feedback system, a large number of researchers have conducted relevant studies in the sphere of English writing teaching. The Pigai platform, an effective automated writing evaluation system, has come to the forefront in the college phase^[2]. This study tries to find out whether the application of the Pigai platform in English writing for TEM-4 can go a long way to effectively improve students' English writing proficiency.

Literature Review

The feedback of automated evaluation systems (AES) in writing first appeared in the United States in 1966. With the popularity of the application of AES in teaching, a large number of studies abroad were made in terms of the relationship between AES, the pedagogy of English writing, a model for teaching feedback, and students' motivation. Elebyary and Windeatt found that AES had a positive effect on the improvement of the quality of the articles based on the experiment of 31 teachers and 549 English teachers^[3]. Li, J., Link, S., and Hegelheimer, V. pointed out that the holistic score was the motivation to encourage learners in the process of revision^[4]. In 2016, Stevenson realized that with the help of AES, teachers had more time to offer students feedback on their compositions, so he suggested that AES should be adopted with the feedback

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of teachers^[5]. In the comparative studies between AES and teacher feedback, researchers believed that the two approaches had their own merits. In 2020, Zhang found that it was students' acceptance that influenced the improvement of their writing proficiency, which was the forerunner of related research, shifting the focus from the effect of AES to the role of students^[6].

In contrast to the studies abroad, domestic research started late and was concerned with the introduction of the principles of the foreign AES. Liang Maocheng and Wen Qiufang analyzed the advantages and limitations of foreign software represented by PEG, IEA, and E-RATER and their working principles, which were the enlightenment for China to develop AES software^[7]. With the advancement of AES in China, studies on its application in teaching increased, most of which focus on college English teaching. In 2015, like other scholars, Wang Boran, Jin Tan, and Zhao Wen found that the trend of applying AES to teaching gradually tended to combine it with teacher feedback^[8]. As the Quku Pigai platform launched in 2011 as a new system for students to revise their English writing, researchers in China held a positive attitude towards its instruction^[9]. Gongwei and Zhou Jun demonstrated that AWE based on the Pigai platform would benefit students' language complexity and stressed its importance in the article^[10].

Nowadays, although the majority of the studies about AES were classroom teaching, few have adopted a domestic automated writing evaluation system (AWE). Therefore, the research on the application of AWE in the writing of TEM-4 endeavors to explore whether the Pigai platform is effective for students' writing ability.

Research Design

Some scholars both at home and abroad have advocated that the blended learning method is an effective way for students in the field of higher education. However, there are still a great number of teachers at colleges and universities employing the traditional single model in teaching, which hinders the improvement of students' efficiency in writing^[11]. As the Pigai platform is one of the most extensively used automatic evaluation systems in China now, this study aims to delve into the differences between feedback from the Pigai and the teachers' feedback in TEM-4 writing instruction.

Research Questions

The research was carried on to resolve the following questions:

- (1) Can the automated scoring system effectively improve the writing proficiency of English-major students?
- (2) Can the application of the Pigai platform inject more impetus into students in writing?
- (3) How do students evaluate the blended learning approach based on the teacher feedback and feedback of the Pigai platform?

Research Participants

Without any experience of AWE, the participants of the study were 60 English-major students from two parallel classes. They were in their junior year and taught by the same TEM-4 teacher in Inner Mongolia Honder College of Arts and Sciences. Based on the scores of the last final examination, their overall English proficiency was at the same level. To corroborate the validity of the statistics, all the students were not informed of being the subjects of the experiment. The Experimental Class (EC) and the Control Class (CC) were randomly picked in the study. Translation Class One of 2019 (EC) adopted a blended teaching method and received feedback from the Pigai platform and the teacher whereas Class Two (CC) was given the traditional teacher's feedback.

Research Procedures

This experiment lasted about two months with a writing task assigned every two weeks. Students from the two classes participated in a total of three writing and feedback sessions.

In the first step, the teacher explained to the students the course arrangement, tasks, and feedback methods for writing in each class. To ensure the students can utilize the Pigai platform, the teacher explained and walked through the operation process of the system. Then, the pre-test was carried out for 30 minutes to verify whether there were apparent discrepancies in writing proficiency between the two classes.

In the second step, the teacher assigned three writing tasks chosen from the past exam papers of TEM-4 to all the students. During the experiment, students of the Experimental Class submitted the compositions according to the writing requirements

and received timely scores and revision suggestions from the Pigai platform. Before the deadline, they were allowed to modify their compositions without restrictions on time and amount. The rating criteria were strictly administered under the principles of TEM-4 writing with the full mark being 100 points. Meanwhile, they also needed to hand in compositions to the teacher so she could afford supplementary feedback to them from various aspects. As for the Control Class, students were required to write compositions on paper, which would be corrected by the teacher in terms of vocabulary and grammatical levels.

In the third step, the two classes were given a post-test at the same time (30 minutes) with the same writing task. Then, all the compositions were corrected and scored by the teacher with students' personal information blocked.

Data Collection and Analysis

There are both quantitative and qualitative research methods employed in the experiment. In the study, the author adopted SPSS 22.0 to conduct data analysis in an independent sample t-test to compare the two feedback methods.

The pre-test results were analyzed to identify the differences in writing proficiency between the two classes while the dissection of the post-test findings could shed light on whether significant progress had been made or not in the English writing proficiency of the Experimental Class with the help of the Pigai platform. As far as the quantitative analysis of the revision process was concerned, the data on the Pigai platform and students' writing samples were all collected and looked into.

The questionnaire survey was conducted online by all the students of the Experimental Class to examine the influence of the automated evaluation system on their attitudes and writing proficiency. Besides, six students from high, average, and low levels were randomly chosen to have an interview after the experiment about their perceptions of the effect of the Pigai platform on their composition revision. The interview was designed to crystallize the preference of students for the teachers' traditional feedback or the blended feedback integrated with the automated scoring system and to solicit their suggestions for subsequent writing instruction. All those were recorded and transcribed into texts for further qualitative data analysis.

Results and Discussion

Whether the Pigai platform can improve students' English writing competence is primarily contingent on the validity of students' performance in the pre-test and post-test. Therefore, the author opted for Independent-Sample T Test and Paired-Sample T Test to conduct a comparative study based on the scores of the pre-test and post-test of the two classes as well as the questionnaires and interviews acquired after the experiment ^[11].

Results of the Tests

Firstly, to know whether the levels of English writing of the students from the two classes were on the same level, the pre-test scores of the Experimental Class and the Control Class were juxtaposed and analyzed by SPSS22.0 in Independent Sample T Test and the results were as follows:

	Group(M+D)		T	P
	CC	EC		
Pre-test	72.533±1.776	73.000 ±2.678	-0.759	0.430

Table 1: Independent Sample T Test of the Pre-test Scores

From table 1, the average scores of the Control Class and the Experimental Class and the p-value 0.43 all indicate that the English writing proficiency of the two classes is not characterized by a drastic divergence, so it is reasonable to choose the two groups as the experimental subjects.

Secondly, to identify whether there was a prominent distinction in the writing competence between the two classes after three-month learning, the researcher also employed SPSS22.0 to compare the post-test scores of the students. The results can be seen in table 2.

	Group(M+D)		T	P
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	CC	EC		
Post-test	77.967±1.884	83.300 ±1.535	-7.513	0.000

Table 2: Independent Sample T Test of the Post-test Scores

As for table 2, the average scores of the CC and the EC of the post-test are 77.967 and 83.3 respectively, displaying that the scores of the two classes both have increased after two months of learning. However, as the p-value is below 0.001, it signifies that there is a large difference between the scores of the EC and the CC.

Next, to gauge if the students had made substantial headway after the experiment, the author employed Paired-Samples T Test to probe into the scores of the two classes.

Class	Paired 1(Pre-test)	Paired 2(Post-test)	Mean	T	P
CC	72.533±1.776	79.967±1.884	-7.433	-16.191	0.000
EC	73.000±2.678	83.300±1.535	-10.300	-17.893	0.000

Table 3: Paired Sample T Test of Two classes

According to table 3, it is palpable that the average score of the Control Class has climbed up from 72.533 to 79.967 and the p-value is far below 0.001, which demonstrates that there is a marked difference between the scores of its pre-test and post-test. Based on the data from Paired-Sample T Test, it is evident that the effectiveness of teachers' feedback on students' writing has been substantiated. Meanwhile, the mean score of the Experimental Class also exhibits a tremendous rise. As the p-value is far below 0.001, the feedback from the teacher and the Pigai proves instrumental in effectively improving students' writing scores. By comparing the scores above, it seems that the blended learning approach used in EC contributes more to improving the writing proficiency of English-major students.

Results of the Questionnaire and the Interview

To further verify the validity of the data and explore students' attitudes toward the two feedback models, 30 questionnaires were distributed and six students were interviewed in the Experimental Class after the post-test.

Scale	N	Writing Motivation	Ease with the Pigai Platform	The Usefulness of the Pigai Platform	Sense of Accomplishment	Overall Attitude
1	30	0%	0%	0%	0%	0%
2	30	10%	10%	0%	7%	0%
3	30	17%	17%	50%	23%	30%
4	30	50%	60%	30%	60%	50%
5	30	23%	13%	20%	10%	20%

Table 3: Students' Attitudes toward Feedback

Based on the design philosophy of Harris & Wambeam, the questionnaire adopted the Likert five-point (1-5) scale to signify students' attitudes and views toward the application of the Pigai platform^[12]. The results above show that students' motivation in English writing grows stronger with specific guidance of the Pigai. Besides, the anxiety of writing is greatly reduced as AWE could provide them with immediate feedback. As the grade changes from lower to higher with the help of AWE, students would come to foster a strong sense of satisfaction and fulfillment. To summarize, the bulk of students hold a positive stance about the application of AWE in the pedagogy of English writing.

After the post-test, six students were interviewed from the Experimental Class to share their insights into the effect of the Pigai platform on their English writing competence. The interview mainly addressed three questions.

- (1) Is the Pigai platform helpful for your writing? And why?
- (2) What is your attitude towards teacher feedback and AWE feedback?

(3) Could you give some advice on the teaching of writing?

Based on the texts of the interview, it is manifest that the student's attitudes towards the Pigai platform were quite positive and they were willing to combine it with the teacher's feedback to hone their writing skills.

Conclusion

The study seeks to probe into whether there are significant divergences in the scores of the post-test when the Pigai platform is applied in the instruction of writing for TEM-4. In terms of AWE feedback, it seems that the Pigai website could aid students in modifying their articles in the aspects of vocabulary, grammar, and collocation. In this way, students are capable of noticing their writing errors and improving the accuracy of their compositions. Compared with teachers' feedback, AWE can arouse students' interest through timely feedback and encourage them to go through more rounds of amendments. In conclusion, the data shows that the Pigai platform can effectively improve the English writing competence of students, boost their motivation, spark their enthusiasm and enhance their self-efficacy in writing.

However, the feedback from the Pigai platform is more likely aimed at correcting surface-level errors in writing and lacks attention to the content and the organization. As AWE can not be as intelligent as human beings, there are also pieces of advice from the system that is not appropriate and clear enough. Hence, the researchers of the Pigai platform and the teachers could make concerted efforts to optimize the functions of AWE to boost the validity of the system. As for the limitations, the results are not reliable and valid enough as they are predicated merely on two-month research concerning the compositions of only 60 students from one college in the experiment. In the future, data collection could involve more participants from various areas with different English levels.

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