

Online Active Learning Activities to Enhance English Writing Skills for Non-native speakers in Vocational College

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Abstract: *The purposes of this study were 1) To design non-native speakers' Online Vocabulary Active Learning activities in English writing skills in a higher vocational college. 2) To assess the English writing learning achievement of Chinese higher vocational college students who participate in Online Active Learning activities by learning items before and after class and examining differences in the English writing learning achievement of students in three different learning groups (low, medium, and high background). 3) To investigate the satisfaction of Chinese higher vocational college students with their online vocabulary Active English writing Learning Activities. The sample studies are 30 students in first-year students at Zhejiang Vocational College. Research tools include online active learning activities and a questionnaire measuring students' satisfaction with online active teaching. Statistics for data analysis are percentage, arithmetic mean, standard deviation, t-test dependent, and ANOVA. The results were as follows: 1. The online active learning teaching method can effectively change students' attitude toward English writing. Students' writing attitude has become more positive and their interest in writing become stronger. 2. Compared with the traditional result teaching method, the online active learning teaching method can improve the English writing level of students at different group, especially middle and low-level students. 3. Most participants (more than 70%) believe that learning English writing skills through online active learning activities is very interesting and can create a good atmosphere in the classroom.*

Keywords: Active Learning, Achievement, Satisfaction, English Writing.

1. Introduction

Internet learning has become a standard learning mode, which can break through the limitations of time and space and realize learning anytime and anywhere. Secondly, it is a supplement to school teaching (Gherhe et al., 2021). Most students were able to gain knowledge and answer various learning questions through Online Active Learning Activities. Online learning has many advantages. If students can take the initiative to use online learning, their knowledge system has enriched. The object of this study is the English writing skills of Chinese higher vocational college students. If they can make up for their lack of English writing skills by taking the initiative to study online, then their English writing ability will get a particular enhancement.

English writing plays an important role in the practice of English writing and the consolidation of English grammar knowledge (Fan, 2021). In English proficiency tests, such as CET-4, English writing accounts for 15% of the total score, and there are corresponding restrictions on the writing time and the number of words in the content (Yang, 2022). According to the characteristics of cognitive ability development of Chinese higher vocational college students and the need for vocational skill development, the English curriculum in higher vocational colleges emphasizes: "Based on the further development of the students' comprehensive language application ability, it is important to

improve the students' ability to acquire information, handling information, analyzing and solving problems in English, especially the ability of thinking and expressing in English." The ultimate purpose of English instruction at higher vocational institutions, based on this goal and requirement, is to enhance students' listening, speaking, reading, and writing skills (Demir & Tavit, 2021). Listening and reading are comprehension skills, whereas speaking and writing are expressive skills. Writing, on the other hand, is the creative use of language, and it is frequently accompanied by the employment of numerous cognitive tasks and methods. To a considerable extent, the level of writing competence reflects the pupils' overall English aptitude (Juan, 2021).

Based on a thorough review of the literature, the author concludes that in recent years, Chinese higher vocational college students' writing skills have grown critical in CET-4 (Yang, 2022). There are three reasons for the lack of initiative in English writing learning in some Chinese higher vocational college students: 1) Students' lack of awareness of Active Learning. 2) Students' ability to take the initiative in learning was inadequate. 3) Lack of autonomy in school education. The initiative is an essential reflection of students' learning ability and teaching goals. After forming the habit of Active Learning, students will deliberately shift from passive to active learning, and their functional learning capacity will increase (Owens et al., 2020).

Vocabulary has a significant impact on the development of English writing abilities. Teachers obviously place a high value on several high-level vocabulary statements in English writing scores (Schenck, 2020). Vocabulary is the cornerstone for performing out English writing, and a comprehensive vocabulary offers the foundation for students' writing (Wang & Hu, 2021). Furthermore, vocabulary acquisition is beneficial for English reading and can improve students' overall English skills. Therefore, the current study aims to research how to develop Online Vocabulary Active Learning activities to improve vocational college students' English writing ability in China.

2. Research Objectives

2.1 To design non-native speakers' Online Vocabulary Active Learning activities in English writing skills in a higher vocational college.

2.2 To assess the English writing learning achievement of Chinese higher vocational college students who participate in Online Active Learning activities by learning items before and after class and examining differences in the English writing learning achievement of students in three different learning groups (low, medium, and high background).

2.3 To investigate the satisfaction of Chinese higher vocational college students with their online vocabulary Active English writing Learning Activities.

3. Research Questions

3.1 Is there any significant difference between pre-test and post-test scores of Online Active Learning activities in English writing achievement by learning items before and after class?

3.2 Is there a significant difference in English writing achievement among students of learning different learning groups (low, medium, and high background). The post-test after undertaking Online Active Learning activities.?

3.3 What satisfaction of students who study through Online Active Learning Activities?

4. Literature Review

4.1 Online Active Learning

Students can enrich their knowledge through Active Learning Online (Hasan & Roy, 2015). Students can gradually develop the habit of Active Learning by using quality online learning resources through Online Active Learning Activities. The development of practices has a lifelong impact on students and improves their self-control. Because students do not make progress without the development of Active Learning Skills, practical learning skills are also the primary learning style that individuals adopt when they enter and leave school. Without functional learning skills, lifelong development is minimal (Ma & Wang, 2016). With the depth of research, many scholars realized the deficiencies of students' independent learning ability in online learning. He argued that students need a teacher and parental supervision and diversified assessment during online learning (Carr & Hage, 2015). Weike designed a personalized recommendation system for online learning resources based on collaborative filtering technology, aiming at improving their Online Active Learning Activities efficiency (Shan, Zhang, Hang, & Weike, 2019).

There are also suggestions for improvement from the perspective of course design. Kriminger, E gave tips for designing Active Learning methods for online courses by analyzing the internal factors and psychological mechanisms that affect Active Learning online in three dimensions: learning motivation, information processing ability, and cognitive

strategies. However, most of these methods are, theoretical studies that are not put into practice. The effectiveness of the system needs to be further examined by scholars (Kriminger & Principe, 2015). To improve students' Online Active Learning Activities, Palaniappa Manickam suggests that students should be the primary focus to promote effective advancement of Online Active Learning Activities in three areas: Online Active Learning Activities awareness, self-control, and self-planning skills, and communication and evaluation (Palaniappa & Kamala, 2016). As it is shown in Figure 1.



Fig 1. Active learning conceptual model

4.2 English Writing

English, as a compulsory course in colleges and universities, after the abolition of the English proficiency level 3 exam, English learning is more demanding for students, and students need to take the English level 4 exam, English writing is an essential part of testing students' English proficiency level, and students with good English writing skills can improve students' English exam scores and inspire students' confidence in learning English at the most direct level (Dumitrescu & Ioana, 2015). English vocabulary is an essential part of English learning and it has great significance in improving students' overall English proficiency. Vocabulary learning always runs through the whole process of English learning. Vocabulary teaching is an essential part of English teaching, and it is the key to the success or failure of English learning (Lifang & Department, 2018).

So how do Improve English Writing Skills?

1. Enhance the reading volume (Mallia, 2017). Read more good masterpieces, short articles, and English news to increase the reading volume and improve the sense of English, which helps to provide ideas for English writing.
 2. Learn to imitate excellent model essays (Teng, 2021). For some daily perfect English writing models, you can first imitate their writing style, and fully understand the writing style and skills of perfect English models, which is an excellent way to improve.
 3. Strengthen the consolidation of grammar knowledge (Liao, 2016). In the process of writing, it is not only necessary to ensure the smoothness of writing statements, but also more essential to pay attention to the correctness of grammar knowledge, so the learning and understanding of grammar knowledge is also a crucial point.
- Oskar-Poisson, C. A pointed out three primary strategies that improved students' English writing skills mainly from students' active ability, and argued through an experimental method, which achieved good results in English writing learning in a university (Oskar-Poisson, C. A.,2017)).

4.3 Achievement

First, students need to understand what types of English writing questions are available on English papers (Olson & Farkas, 2017). The current types of English writing among the English level exams for college students in China are mainly looking at pictures to write essays, writing in English around a theme, and so on. Secondly, students should improve their control time for each topic (Amir & Hadi, 2016). Third, language, as mentioned before, is the foundation of English writing (Koross & Okwach, 2015). Fourth, the time for learning English writing in class is limited, which requires students to use their break time to keep learning English writing. Especially for students in higher education institutions, active English writing learning is essential (Toivainen, & Kovas, 2021). Fifth, improve your English writing performance by learning vocabulary. One is to memorize vocabulary, second is that students themselves improve the initiative of vocabulary learning.

Achievement includes the performance received from teachers and parents about students' English writing and the related presentation of scores (Adaros & Esperanza, 2017). to ensure the operationalization of the dissertation study, the criteria for good or bad performance in English writing in this paper are mainly judged by the scores of English writing performance. The total score English writing grade was taken as 15 points, and the rates were divided into six rates: 13-15, 10-12, 7-9, 4-6, 1-3, and 0 (Budiman & Rahmat, 2015).

4.4 Satisfaction

Improving students' satisfaction mainly lies in the fact that the relevant learning activities match students' interests (Gibbons & Perkins, 2015). Web resources can transform abstract English knowledge into creative and concrete content and present students with a colorful learning atmosphere through pictures, text, and videos, which not only attracts students' attention but also enhances their interest in learning and desire for inquiry, prompting them to actively and independently participate in English learning (Gray & Diloireto, 2016). When students are confronted with novel and interesting online learning resources, they will actively participate in learning, deepen their impressions and memories of English knowledge, mobilize their various senses, and improve their learning abilities. Using online resources creates a relaxed, pleasant, democratic, free, harmonious, and equal education atmosphere for students to express their ideas and opinions on time. Then the teaching is launched to suit their needs (Rafael, 2017).

The second is to conduct learning activities that allow students to progress through the learning activities (Dziuban & Hermsdorfer, 2015). This requires the design of English writing learning activities to be relevant, personalized, and effective in obtaining a transformation in English achievement through student initiative. Students gain a sense of accomplishment and, therefore, increase their satisfaction. Satisfaction is more abstract, so this paper uses a "five-segment" approach, dividing pleasure into five parts: delighted, relatively satisfied, average, reasonably dissatisfied, and very dissatisfied, and analyzes the overall satisfaction index through different students' choices.

5. Research Framework

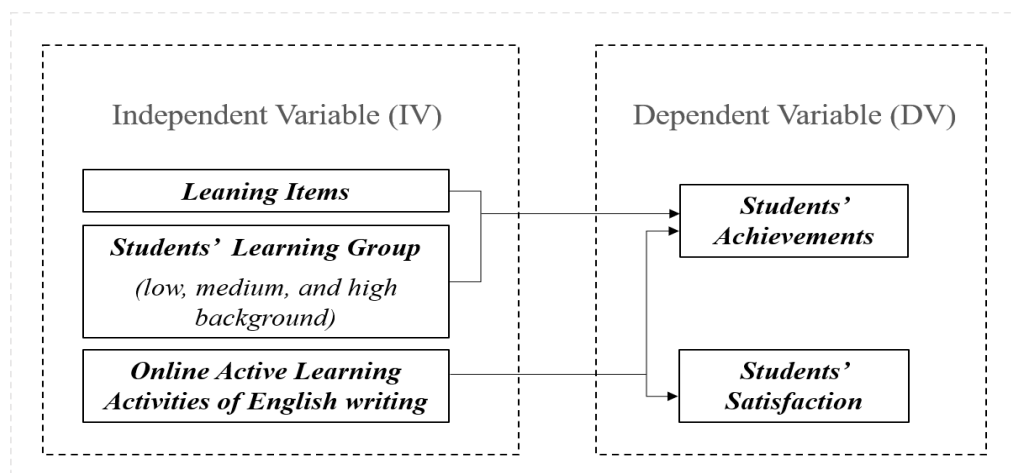


Fig 2. Research Framework

6. Research Methodology

6.1 Population and sample

The target population is 180 first-year students in Zhejiang Vocational College (6 classes). First, the researchers determined that all classes had students with grades from high to low. Then 30 students are randomly selected from one of the 6 classes. These 30 students served as the participants in this study by using the cluster sampling technique and implemented online active learning activities for all English writing skills for them. The experiment was conducted with the consent of the 30 students and their parents.

6.2 Data collection

The data were collected through pre-tests, post-tests, and questionnaires.

The "pre-test", first, provides an understanding of the overall level of students' writing level, which provides a guideline for the researcher to plan the lessons, and set the weekly lesson content and the lesson planning time. Second, it gives an understanding of students' English writing skills. The situation of the English writing level provides a guiding basis for the content of vocabulary learning and determines the situation of the difficult position of vocabulary learning.

The data from the post-test serves would be taken as a comparison. Because the types of test questions on the post-test are the same as those on the pre-test, there is comparability between the pre-test and the post-test. Regarding language ability, comparisons can be made of students' answers to multiple-choice questions (correct rates and scores); regarding English writing skills, comparisons can be made of students' English essay scores.

The design of the questionnaire is mainly aimed at students' satisfaction with the four weeks vocabulary learning activity and their relevant suggestions, which can also reveal the effectiveness and shortcomings of the study and guide the researcher's direction for future research.

7. Data Analysis

The pre-test and post-test scores were calculated to find any significant differences by finding the mean of the scores. To find out the standard deviation (S.D.) and the significance of the pre-test and post-test scores, a t-test dependent was used in this study.

The difference in participants through active learning to explore their English writing skills in students' learning group (low, medium, and high background) by post-test after undertaking learning activities. A one-way ANOVA was used in this study.

The quantitative results obtained from the closed-ended questions in the questionnaire determine any significant differences by calculating the mean and standard deviation (S.D.) of the scores. The interpretation of the average score of the close-ended questionnaire was as follows:

4.00 – 5.00 = Very High

3.00 – 3.99 = High

2.00 – 2.99 = Moderate

1.00 – 1.99 = Low

0.00 – 0.99 = Very Low

The quantitative results show that students' perceptions of Active Learning activities are obtained through vocabulary.

8. Findings

The total score and each score analysis of the composition of the students in the experimental class are shown in Table 1.

Table 1 shows that the P values of the total achievement and five items' achievements of the composition in the experimental class are < 0.05 , indicating that there are significant differences between the pre-test and post-test achievements in the total achievement and the five items of content expression, text organization structure, vocabulary use, grammatical errors, spelling and punctuation errors, and the average achievement of the post-test is higher than that of the pre-test. It shows that after the intervention conditions, that is, after the implementation of the process genre teaching method in the experimental class, the total score of students' compositions and the score of five items in the experimental class have been significantly improved. Compared with the pre-test average score of the total composition score and five items score, the overall composition score of the experimental class increased by 2.9 points, the post-

test average score of content expression increased by 1.06 points, the post-test average score of text organization structure increased by 1.12 points, the post-test average score of vocabulary increased by 0.28 points, the post-test average score of grammar increased by 0.18 points, and the post-test average score of spelling and punctuation increased by 0.26 points. It can be concluded that after the implementation of the process genre teaching method in the experimental class, students improved the most in content description and text organization structure, and the average achievements of these two items increased by 1.06 and 1.12 respectively.

Table 1. t-test of the total achievement of the pre-test and post-test composition and the achievement distribution of each item in the experimental class

Paired t-test results						
Items		Mean value	N	Standard deviation	t	p
Total score of composition	Pre-test	15.22	30	4.022	-17.873	0.000
	Post-test	18.12	30	4.064		
Content description	Pre-test	2.56	30	0.787	-11.499	0.000
	Post-test	3.62	30	0.830		
Text organization	Pre-test	2.28	30	0.882	-14.182	0.000
	Post-test	3.40	30	0.881		
vocabulary use	Pre-test	3.60	30	0.857	-2.714	0.009
	Post-test	3.88	30	0.982		
syntax error	Pre-test	3.16	30	1.131	-2.137	0.038
	Post-test	3.34	30	1.002		
spelling and punctuation errors	Pre-test	3.62	30	1.028	-2.098	0.041
	Post-test	3.88	30	1.081		

The analysis of the writing performance of the experimental classes in the three-year groups of high school before and after the experiment is shown in Table 2.

The p-values for all three groups, high school, and low school, were <0.05 , indicating that there was a significant difference between the pre- and post-test essay scores of the students in the high school and low school groups in the experimental class. Secondly, the means allow us to demonstrate again that there is a significant difference between the pre- and post-test essay scores of the three groups of students. The mean score of the middle group increased from 16.92 to 20.58, an increase of 3.67 points; the low group increased from 10.61 to 13.11, an increase of 2.5 points; and the high group also increased from 20.50 to 22, an increase of 1.5 points. Compared to the three groups, the middle group scored the highest, followed by the low group.

The online active learning activity teaching method can improve the English writing skills of different groups of students, especially for the middle and low groups. This is because, in this experimental study, this teaching method did not abandon the development of the writing interests of the low-level writing students while focusing on the high- and middle-level students. Although the low-level writing students have a weak foundation in English, they will slowly make progress as long as the teachers are patient and gradually provide guidance.

Table 2. Paired t-test of test data before and after the three groups of high and low-group students in the experimental class

Paired t-test results							
Project			Mean value	N	Standard deviation	t	p
High group	Total score of composition	Pre-test	17.50	8	0.756	-5.612	0.001
		Post-test	18.00	8	0.926		
Medium group		Pre-test	13.92	14	1.349	-18.651	0.000
		Post-test	16.58	14	1.100		
Low group		Pre-test	7.61	8	2.062	-17.153	0.000
		Post-test	10.11	8	1.844		

Students' satisfaction

The data for the student satisfaction analysis in this experiment came from data collected from questionnaires distributed to 30 students in the experimental class. At the end of the experiment, 30 questionnaires were distributed to the students of the experimental class, of which 30 questionnaires were returned and 30 questionnaires were valid with a return rate of 100%. Analysis of the reliability and validity of the questionnaires

Reliability analysis of the questionnaires To test the reliability of the returned questionnaires, the author conducted a reliability test on the 20 questions in the questionnaire. The results of the reliability test are shown in Tables 3 and 4.

Table 3. Questionnaire case processing summary

		N	%
Case	Effective	30	100.0
	Excluded ^a	0	0.0
	Total	30	100.0

Table 4 Questionnaire reliability statistics

Cronbach's Alpha	Number of items
0.718	20

The two tables above are a test of the reliability of the questionnaire. According to Table 3, 30 questions in the questionnaire are valid. According to 4, out of 20 questions in the questionnaire, Cronbach $\alpha = 0.718 > 0.6$, the reliability is good and passes the reliability test.

Analysis of the validity of the questionnaire

The test indicators of validity were KMO values and Bartlett's spherical test values. As shown in Table 6, KMO = 0.7, the validity coefficient is greater than 0.6, Sig < 0.05, and the questionnaire passed the validity test. In summary, through the tests of reliability and validity, Questionnaire 1 can be subjected to the following statistical analysis.

The data on student satisfaction are shown in Tables 5 to 9.

Table 5. Questionnaire KMO and Bartlett's test

Kaiser Meyer Olkin measure of sampling adequacy		0.700
Bartlett's sphericity test	Approximate Chi-square	1219.120
	df	190
	Sig.	0.000

Table 5 illustrates that online active learning activities engage students' attention to writing and stimulate their interest in writing more than traditional writing classes.

Table 6. General situation of students' interest in English writing class

Class size	Minimum value	Maximum value	Mean value	Standard deviation
30	1.43	3.66	3.22	0.88

Table 7. Statistical analysis of students' learning interest

Four dimensions of interest	Subject	5(%)	4(%)	3(%)	2(%)	1(%)	Mean	S.D.	Result
Learning interest	Active online vocabulary learning activities are fun.	6	20	44	28	2	3.00	0.93	High
	Active online vocabulary learning activities can help you remember words more easily.	10	29	46	13	2	3.37	0.84	High
	Active online vocabulary learning activities can increase your motivation to learn English.	12	20	50	18	0	3.30	0.90	High

Statistical Table 7 shows that 60% of the students in the class had a positive attitude towards learning English writing skills through online active learning activities. The reason for the increase in students' expectations of the writing class is that the online active learning teaching model has attracted students' interest in the topic of writing and motivated them to participate in the writing class by, under the diverse, interesting, group, thinking and experiential activities.

In conclusion, compared to students in the traditional writing teaching mode, students in the online active learning teaching mode have increased curiosity and curiosity in writing classes, are more relaxed and happy, have a growing desire to learn, and have gradually increased their learning goals.

As can be seen from Table 8, over 70% of the students in the experimental classes felt that the online active learning activities better-motivated students to engage in writing.

The higher the students' interest in classroom teaching, the higher the thinking activity for learning. A teaching model that stimulates students to think actively, teaches them to think, and exercises their thinking skills is the only way to achieve good teaching results. In the questionnaire, it is clear from the statistics (66% and 68% of students who fit the phenomena described in table 9 above) that the changes in the teacher's teaching style, guided by the online active learning model, have attracted students to participate in the classroom, promoted independent thinking or collaborative learning, and encouraged students to question and speak up. The changes in students' interest in writing classes and writing are evident in their growing interest in writing.

Table 8 Statistical analysis of students' learning experience

Four dimensions of interest	Subject	5(%)	4(%)	3(%)	2(%)	1(%)	Mean	S.D.	Result
Sense of learning experience	Active online vocabulary learning activities can help you remember more words.	8	10	56	20	6	2.90	0.91	Moderate
	Active online vocabulary learning activities can provide more ways to learn vocabulary.	12	20	50	18	0	3.30	0.90	High
	Active online vocabulary learning activities can help you with your English writing.	10	14	42	28	6	3.00	1.02	High

Table 9. Statistical analysis of students' learning and thinking activity

Four dimensions of interest	Subject	5(%)	4(%)	3(%)	2(%)	1(%)	Mean	S.D.	Result
Learning and thinking activation	Active online vocabulary learning activities are more effective than traditional ways.	10	14	42	28	6	3.00	1.02	High
	I will use the active online vocabulary learning activities for more learning in the future.	10	26	32	16	16	3.03	1.17	High

Learning participation is one of the criteria to measure students' interest in the classroom. The effective application of appropriate writing teaching mode in senior high school English can effectively reflect the dominant position of students in the new curriculum reform environment, enhance students' interest in English, and effectively improve teachers' teaching quality. In the writing class, students' participation is embodied in whether they actively interact with their classmates and teachers, and whether they actively speak. Under the guidance of different teaching modes, students' participation in the writing classroom is different.

Some students (23%) who studied under the online active learning teaching model showed that they were extremely willing to actively participate in classroom activities and actively perform. More than half of the students began to try to participate in the writing class wholeheartedly. This change shows that the online active learning writing teaching mode can enable most students to actively participate in the writing teaching classroom, but it may not fully mobilize students' interest in the English writing classroom and enhance their motivation for writing learning. However, compared with the traditional writing teaching mode, students prefer teachers to use online active learning mode to teach writing.

Table 10. Statistical analysis of students' learning participation

Four dimensions of interest	Subject	5(%)	4(%)	3(%)	2(%)	1(%)	Mean	S.D.	Result
Learning and thinking activation	Active online vocabulary activities can increase your motivation to learn English vocabulary.	8	15	56	17	4	3.07	0.85	High
	Active online vocabulary activities can increase your motivation to learn English vocabulary.	8	10	52	22	8	2.87	0.92	Moderate

9. Discussion

Most relevant studies have shown that online active learning activity teaching method can effectively improve students' English writing level. Most the teaching research is to introduce the theory of online active learning activities or studies the specific operation steps, and most of the teaching experiments are based on the teaching steps of the online active learning activity teaching method proposed by Riffell and Sibley (2003). This paper discusses whether there is a significant difference between pre-test and post-test scores of Online Active Learning activities in English writing achievement by comparing item learning scores before and after class. Through the analysis of the above writing test results, it can be explained that after online active learning, non-English students' English writing skills are significantly improved, which is specifically reflected in the improvement of students' performance in five aspects of composition (content expression, text organization, vocabulary, grammar, spelling, and punctuation).

The research results of Entwistle (2000) show that there is no difference between good and bad teaching methods. Different teaching methods should be adopted for students with different learning groups. In this study, the results show that the average score of the participants in the pre-test is 15.22, with a standard deviation of 4.022, and the average score of the post-test is 18.12, with a standard deviation of 4.064. According to the analysis of students' scores before and after the English writing skills test, their post-test scores are higher than the pre-test scores. In addition, this paper discusses whether there is a significant difference in English writing achievement among students of learning groups (low, medium, and high background) the post-test after undertaking Online Active Learning activities. The results indicate that the online active learning activity teaching method can improve the English writing level of students in a different groups, especially for middle and low-level students.

To improve students' learning satisfaction, measures can be taken to ensure effective communication between teachers and students, timely update curriculum content, and improve teachers' discipline and professional quality (Bao, 2019). Ibáñez et al. (2020) conducted a questionnaire survey with students in continuing education as the research object, studied the influencing factors of learning satisfaction, and found that there is a relationship between teachers' quality, teaching content, teaching equipment, teaching plan, and learning satisfaction of students in continuing education. The systematic and in-depth research on learning satisfaction began with Roberson and Merriam (2005). Chang and Chang (2012) believe that the learning motivation of middle school students will significantly affect the learning effect in distance education. This paper discusses the attitude of first-year students in Zhejiang Vocational College towards learning English writing skills through online active learning activities, and analyzes the answers to the questionnaire. The survey results show that most participants (more than 70%) believe that learning English writing skills through online active learning activities is very interesting and can create a good atmosphere in the classroom. In addition, they also believe that learning English writing through this method not only helps them remember writing skills more easily, but also improves students' interest in learning.

10. Conclusion

Based on combing the research status of online active learning teaching methods at home and abroad and analyzing the current situation of English writing teaching, after four months of writing teaching practice, through the data analysis of questionnaire survey and writing test, the experimental results verify the effectiveness of online active learning teaching method in English writing teaching. Through the research, the author draws the following conclusions:

1. According to the statistics of the questionnaire, the results show that the online active learning teaching method can effectively change students' attitude toward English writing, and can recognize the help of the online active learning teaching method to their English writing.
2. According to the statistics of the two writing test results, the results show that compared with the traditional result teaching method, the online active learning teaching method can improve students' English writing performance, which is specifically reflected in the improvement of students' scores in five aspects of composition (content expression, text organization structure, vocabulary, grammar, spelling and punctuation use), but the improvement in content expression and text organization structure is the highest, The average scores of the two items were increased by 1.06 points and 1.12 points respectively, with an increase of more than 1 point.
3. According to the statistics of the pre-test and post-test writing scores of students with three low writing groups in senior high school, the results show that the online active learning teaching method can improve the English writing level of students in a different groups, especially the middle and low-level students. By comparing the pre-test and post-test writing scores of the students in the lower three groups of senior high school in the experimental class, it can be seen that the students in the middle group have the highest improvement, followed by the low group. The reason is that the students in the high group already have a high writing level, solid basic knowledge, and certain writing skills.

References

- Adaros, A., & Esperanza, A. (2017). The Influence of Self-Regulation, Motivation, Proficiency, and Gender on L2 First-Year Writing Achievement.
- Amir, S., & Hadi, S. (2016). Impact of explicit vocabulary instruction on writing achievement of upper-intermediate efl learners. *International Education Studies*, 9(4), 141.
- B J. Zimmerman and A Bandura (1994). Impact of self- regulatory influences on writing course attainment. *American: Educational Research Journal*1.
- Bao, W. (2019). On teachers' professional qualities structure and development mechanisms in the business English discipline. *Chinese Journal of Applied Linguistics*, 42(2), 218-235.
- Budiman, & Rahmat. (2015). A longitudinal study of student achievement and dropout in a distance learning English writing course.
- Bymne, D (1998). *Teaching Writing Skills*. Pearson Education Ltd.
- Carr, R., Palmer, S., & Hagel, P. (2015). Active Learning: the importance of developing a comprehensive measure. *Active Learning in Higher Education*, 16(3), 173-186.
- Chang, I. Y., & Chang, W. Y. (2012). The effect of student learning motivation on learning satisfaction. *International Journal of Organizational Innovation (Online)*, 4(3), 281.
- Demir, M. D., & Tavi, Z. M. (2021). The effect of technology-based materials on vocational high school students' listening skill. *Journal of Language and Linguistic Studies*, 17(1), 448-457.
- Dumitrescu, C. I., Moldovan, M. L. C., & Ioana-Claudia Nuu. (2015). Improving functional texts writing skills in English as a foreign language. *Procedia - Social and behavioural Sciences*, 203, 168-172.
- Dziuban, C., Moskal, P., Thompson, J., Kramer, L., & Hermsdorfer, A.. (2015). Student satisfaction with online learning: is it a
- Entwistle, N. (2000). *Approaches to Studying and Levels of Understanding: The Influences of*. Higher Education: Handbook of Theory and Research 15, 15, 156.
- Fan, W. R. (2021). A study of English Writing Test in Senior High School Entrance Examination on English Writing Teaching. *Studies in Literature and Language*, 23(1), 68-71.
- Gherhe, V., Stoian, C. E., Frcaiu, M. A., & Stanici, M. (2021). E-learning vs. face-to-face learning: Analyzing students' preferences and behaviors. *Sustainability*, 13(8), 1-15.

- Gibbons, S., Neumayer, E., & Perkins, R. (2015). Student satisfaction, league tables and university applications: evidence from Britain. *Economics of Education Review*, 48, 148-164.
- Gray, J. A., & Diloreto, M. (2016). The effects of student engagement, student satisfaction, and perceived learning in online learning environments. *International Journal of Educational Leadership Preparation*.
- Hasan, M., & Roy-Chowdhury, A. K. (2015). Context Aware Active Learning of Activity Recognition Models. 2015 IEEE International Conference on Computer Vision (ICCV). IEEE.
- Ibáñez, M. B., Portillo, A. U., Cabada, R. Z., & Barrón, M. L. (2020). Impact of augmented reality technology on academic achievement and motivation of students from public and private Mexican schools. A case study in a middle-school geometry course. *Computers & Education*, 145, 103734.
- Juan, C. (2021). A cultural and functional approach to the assessment of logical thinking ability in English writing. *Scientific Programming*.
- Koross, B. T., Indoshi, F. C., & Okwach, T. (2015). Correlation between Teacher Factors and Students' Achievement in English Functional Writing Skills in Secondary Schools in West Pokot County, Kenya.
- Kriminger, E., Cobb, J. T., & Principe, J. C. (2015). Online Active Learning Activities for automatic target recognition. *IEEE Journal of Oceanic Engineering*, 40(3), 583-591.
- Liao, Y. Q. (2016). The research of formative assessment on English writing teaching in higher vocational colleges. *Journal of Tianjin Sino-German Vocational Technical College*.
- Lifang, D. U., & Department, F. L. (2018). On the negative transfer of mother tongue on the syntactic level in college English writing of higher vocational college. *Journal of Zhenjiang College*.
- Ma, L., Destercke, S., & Wang, Y. (2016). Online Active Learning Activities of decision trees with evidential data. *Pattern Recognition*, 33-45.
- Mallia, J. (2017). Strategies for developing English academic writing skills. *Arab World English Journal*, 8(2), 3-15.
- Olson, C. B., Matuchniak, T., Chung, H. Q., Stumpf, R., & Farkas, G. (2017). Reducing achievement gaps in academic writing for latinos and english learners in rates. *Journal of Educational Psychology*, 109(1), 1-12.
- Oskar-Poisson, C. A. (2017). Preparing English Educators to Teach Rhetorical Analysis as a Writing Skill: A Descriptive Program Analysis of New Hampshire Institutions of Higher Education. (Doctoral dissertation, New England College.).
- Owens, D. C., Sadler, T. D., Barlow, A. T., & Cindi, S. W. (2020). Student motivation from and resistance to active learning rooted in essential science practices. *Research in Science Education*, 50(1), 253-277.
- Palaniappa Manickam, M. Kamala. (2016). Stimulating deep learning using Active Learning techniques. *Malaysian Online Journal of Educational Sciences*, 4.
- Rafael. (2017). The student satisfaction with educational podcasts questionnaire. *Escritos de Psicología* (Internet).
- Riffell, S. K., & Sibley, D. H. (2003). Learning online. *Journal of College Science Teaching*, 32(6), 394.
- Roberson Jr, D. N., & Merriam, S. B. (2005). The self-directed learning process of older, rural adults. *Adult education quarterly*, 55(4), 269-287.
- Schenck, A. (2020). Examining the influence of native and non-native English-speaking teachers on Korean EFL writing. *Asian-Pacific Journal of Second and Foreign Language Education*, 5(2), 1-17.
- Shan, Jicheng, Zhang, Hang, Liu, & Wei, et al. (2019). Online Active Learning Activities ensemble framework for drifted data streams. *IEEE Transactions on Neural Networks and Learning Systems*, 30(2), 486-498.
- Teng, M. F. (2021). The effectiveness of incorporating metacognitive prompts in collaborative writing on academic english writing skills. *Applied Cognitive Psychology*.
- Toivainen, T., JJ Madrid, Alero, Chapman, R., Mcmillan, A., & Y Kovas. (2021). Creative expressiveness in childhood writing predicts educational achievement beyond motivation and intelligence: a longitudinal, genetically informed study. *British Journal of Educational Psychology* (8).
- Wang, S., & Hu, H. (2021). The analysis of the test for English vocabulary learning strategies under relativism. *IOP Conference Series: Earth and Environmental Science*, 692, 042087.
- Yang, R. (2022). An empirical study of claims and qualifiers in ESL students' argumentative writing based on Toulmin model. *Asian-Pacific Journal of Second and Foreign Language Education*, 7(1), 1-17.