

The Influence of Background Music Teaching on the Accuracy and

Fluency of College Students English Writing in China

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Abstract

The paper studies the influence of background music teaching on the accuracy and fluency of English writing of College students. It is showed that: 1). Background music teaching can help improve the accuracy of English writing of the students. To be specific, background music teaching can reduce lexical errors greatly and restrain syntactic errors efficiently, but does not show any advantage in decreasing the students' morphological errors and punctuation errors.2). Compared with traditional teaching, background music teaching cannot promote the fluency of English writing of the students.3). Although background music teaching can release students' anxiety, it may not help the students to obtain more comprehensible input. Therefore, teachers should increase the opportunities for students to practice English writing and enrich their task variety, which enable them write. At the same time, teachers should develop students correct English writing skills and habit. Students should accumulate good sentences, recite more excellent composition and fixed expressions to use them in English writing to eliminate negative impact in mind, so as to extract relevant information fluently in mind to improve English writing quality.

Keywords: background music teaching; English Writing; accuracy; fluency

1. Introduction

Georgi Lozanov, the Bulgarian psychotherapist Georgi Lozanov, put forward "Suggestopedia" in the 1960s.He suggested one of the teaching forms is background music teaching. This is a teaching method that makes use of the unique charm of music to generate implying power. Its effective implementation is conducive to creating a good atmosphere, so that students can relax, overcome anxiety, generate a sense of pleasure, and achieve the maximum teaching effect[1].Murphey says: "music can change classroom atmosphere, which can supply energy when lack of energy and motivate imagination when students do not know how to write and. Music can also take up the right atmosphere of one's brain and make study a cheerful experience." The"Mozart effect" proposed by American scientists in the early 1990s also proved that background music had a positive effect on language learning. Kenji Saeki [2], a Japanese scholar, proposed ten methods of using background music in a middle school English classes based on his own teaching experience. Domestic scholars have also studied background music teaching. Wu Ailan [3] analyzed the influence of background music teaching on English intensive reading class and English grammar class in health school students. She thinks that

background music teaching makes students relaxing and cheerful and can eliminate fatigue, inspire thought, improve students' studying interest and school record. Cao guangfa [1] discussed background music teaching from psychological point of view; Gong Jufang [4] studied the influence of Mozart background music on college students' English reading comprehension scores. Mozart background music does not show any improvement on college students reading scores, but has positive role in promoting the English reading performance of students loving music. Mei Jingyi states that background music teaching plays a more facilitating role in students' oral output[5]. Song Yanbei found that background music teaching does not facilitate freshman's oral English[6].

English writing is a crucial part for college students to acquire second language. Affect is an important learner factor influencing second language acquisition[7]. As for its influence, Krashen's[8,9] Affective Filter Hypothesis provides an influential explanation. He states that motivation, confidence, anxiety and other affective factors have impact on second language acquisition by influencing language input. Of the above affective factors, anxiety can not be ignored. In the process of English writing, learners have some problems like title formulation, content selected, word choice and something else, which is easy to produce tension and As a specific form of foreign language anxiety, writing anxiety mainly refers to the anxiety anxiety. psychology and behavior of foreign language learners in the process of writing[10]. Too much anxiety can influence directly students' thought and meet many difficulties and psychological block in the process of English writing, which lead to students' negative mood and frustration. Students can not experience joy and achievement brought by English writing, thus affecting the accuracy and fluency of their English writing. Therefore, to help students improve their English writing and conquer anxiety by taking relevant measures to relieve anxiety is very urgent. In the English writing teaching, one of effective methods to relieve anxiety is background music teaching because background music helps to create a relaxed atmosphere, in which anxiety and tension can be alleviated and the attention to the new content can be aroused[11].

To sum up, scholars at home and abroad have studied the relationship between background music and English learning from different perspectives. However, up to now, little research on the relationship between background music and oral accuracy and fluency of non-English majors in colleges and universities. This paper made an exploratory attempt in this regard.

2. Research Method

2.1 Research questions

Based on the above discussion, this paper studies the influence of background music teaching on the development of English writing for higher vocational college freshmen of Chinese non-English majors through a teaching experiment. The specific research questions are as follows:

1). Can background music teaching improve the accuracy of English writing of college students in China?

2). Can background music teaching improve the fluency of English writing of college students in China?

2.2. Participants

The participants of the study are first-year non-English major students at Zhengzhou Electric Power Vocational and Technological College. Two natural classes of the same major at the same school were selected. Each class has 20 students and there are 40 students in total. One class is taken as experimental class (Background music teaching) and the other is control class (traditional teaching). Both of them have the same teacher, syllabus, course book and teaching schedule. Due to their same major and grade, I assume that they are homogenous in other affective factors such as learning motivation, confidence, etc.

2.3. Experiment Procedures

The study lasts one semester (16 weeks) and adopts "Pre-test -Experiment Teaching- Post-test." Pre-test is conducted at the beginning of the term and post-test is conducted at the end of the term. Between the pre-test and post-test is experimental teaching. In the experimental group(class B), I have classes by background music teaching; in the control group(class A), I have classes by traditional teaching. Both of the classes write the same title "My favourite season" in both of the tests, which last 30 minutes and at least 80 words.

As it is a familiar topic to students and everyone can write something about the topic, which can reflect students' real English writing level. The written materials on the two tests from the two classes were rewritten on my notebook for quantitative and qualitative analysis. At the pre-test, the students did not know that they would write the same topic on the post-test. The students did not receive the same topic during the teaching time. Practice effects have been minimized.

2.4 Variable Definition and Measurement

Radocy and Boyle define background music as any kind of music played when the listener's attention focuses on a task or an activity rather than purely listening to the music[12]. In this paper, background music is defined as "classical light music without lyrics played by teachers for the purpose of auxiliary teaching in English class."

Accuracy evaluation of English writing in the paper adopts three indicators to measure, namely, Error-Free T-units/T-units, Total Errors/Total T-units and Words in Error-Free T-units/Total Words[13].

Fluency evaluation of English writing in the paper adopts three indicators to measure, namely, total Words/total number of T-unit, total Words/the number of clause, and total words/the number of Error-Free T-unit.

The paper also knows students' views of background music teaching through questionnaires to assist in the validation of the findings.

2.5 Data Collection and Analysis

The data collected in this study includes students' written composition (pre-and post-test manuscript) and questionnaire data.All the collected data were analyzed by SPSS software. According to Ferris and Roberts' error analysis [14], the paper divides errors into 10 types: sentence pattern, tense, single-plural noun, article, Subject-Verb agreement, word choice, verb, pronouns, spelling (punctuation,Upper and lower case letters, etc.) and others.

Each composition is manually annotated: E(error),T(T-unit),C(clause), EFT(error-free t-unit) and W(total words). Each composition is analyzed by independent sample t-tests to test accuracy and fluency of students' English writing.

3. Research Result

3.1 Accuracy Result of English Writing

Table 1 shows the accuracy result of English writing in the pre-test and post-test in the two classes. Class A adopts traditional teaching and class B background music teaching. There were 3-group ratios in each class. The table is analyzed as follows.

	Evaluation projects	Pre-test/ post-test	Class A		Class B			
			Mea	Stand	mea	Stand	t	р
			n	ard	n	ard		
Accur	projects	post-test		Devia		Devia		
acy				tion		tion		
of	Error-Free T-	Pre-test	0.71	0.26	0.38	0.26	3.06	0.006*
Englis	units / T-units							*
h		post-test	0.33	0.28	0.52	0.21	_	0.034*
writin							2.22	
g	Total Errors	Pre-test	0.79	0.44	1.51	0.84	_	0.032*
	/ Total T-						2.29	
	units	post-test	1.46	0.79	1.01	0.69	1.82	0.078
								n.s.
	Words in	Pre-test	0.68	0.28	0.33	0.24	3.2	0.004*
	Error-Free T-						1	*
	units / Total	post-test	0.29	0.28	0.52	0.23	-	0.010*
	Words						2.74	

Table 1 The Accuracy Result of English writing in the pre-test and post-test in Class A and B

P>0.05= Class A and B are not significantly different, n.s.=not significant; P<0.05= Class A and B are significantly different, * =significant; P<0.01= Class A and B are very significantly different, **= very significant.

First, the ratio of Error-Free T-unit to T-unit.In the pre-test, the mean of Class A is 0.71, the standard deviation is 0.26; while the mean of Class B is 0.38, the standard deviation is 0.26. The accuracy of Class A is higher than that of Class B and independent sample t-tests shows there is very significant different between Class A and Class B. Therefore, we can assume: the difference in post-test accuracy is mainly due to different teaching methods. In the post-test, the mean of Class A decreased to 0.33, while the mean of Class B increased to 0.52, which shows significant difference. In all, it shows that the background music teaching improves the accuracy of Class B, while the accuracy of Class A decreases significantly.

Second, the ratio of Total Errors to Total T-units.In the pre-test, the mean of Class A is 0.79,the standard deviation is 0.44; while the mean of Class B is 1.51, the standard deviation is 0.84. Independent t-test shows there is significant between Class A and Class B.Therefore,we can assume that the difference in post-test accuracy is mainly due to different teaching methods. In the post-test, the mean of Class A is 1.46, the standard deviation is 0.79; while the mean of Class B is 1.01, the standard deviation is 0.69. Independent t-test shows there is no different between Class A and Class B. In all, the error rate of Class A in the post-test increases two times than that of in the pre-test, while the error rate of Class B in the post-test decreases to 1.01, background music teaching decreased the error rate of Class B.

Third, the ratio of Words in Error-Free T-units to Total Words. In the pre-test, the mean of Class A is 0.68, the standard deviation is 0.28; the mean of Class B is 0.33, the standard deviation is 0.24. Independent t-test shows there is very significant different between Class A and Class B.We can assume: the difference in the post-test is mainly due to different teaching method. In the post-test, the mean of Class A is 0.29, the standard deviation is 0.28; the mean of Class B is 0.52, the standard deviation is 0.23. Independent t-test shows there is significant difference between Class B. In all, background music teaching increases the accuracy of Class B.

To make analysis more accurate, four types of errors (lexical, morphological, syntactic and punctuation) are also analyzed. See Tables 2:

Table 2. Percentage of the Four Types of Errors in the Pretest and post-test in Class A andB.

Class	Pre- test/ post- test	Lexical errors	Morphological errors	Syntactic errors	Punctuation errors	Total errors
Class A Troditional	Pre- test	11(27%)	6 (15%)	9 (22%)	15 (36%)	41
Teaching	post- test	59(34%)	11 (6%)	52(30%)	53 (30%)	175
Class A Background	Pre- test	67(43%)	8 (5%)	52(34%)	27 (18%)	154
Music Teaching	post- test	28(20%)	10 (7%)	51(38%)	47 (35%)	136

Table 2 shows that: in the pre-test, the total errors of Class A is 41, while there are 175 errors in the posttest. There are 154 errors in the pre-test of Class B, 136 in the post-test. Of the four types errors, the number of lexical errors has the greatest change. The post-test of lexical error in Class A is 48 more than that in the pretest, while the post-test of lexical error in Class B is 39 fewer than that in the pretest. There is almost no difference in syntactic errors in Class B between pre-test and post-test, and the punctuation errors in the posttest is 20 more than that in the pre-test. There is no difference in morphological errors between Class A and Class B. In all, table 2 shows that background music teaching effectively helps students to reduce the lexical errors and the total number of errors, and effectively suppressed the syntactic errors, but has no significant effect on morphological errors and punctuation errors.

3.2 The Fluency Result of English Writing

Table 3 shows the fluency result of English writing of Class A and B in the pre-test and post-test.it is analyzed as follows.

	Evaluation projects	Pre- test/ post- test	Class A		Class B			
Fluen cy of Engli sh writi ng			Mean	Standar d Deviati on	Mea n	Standar d Deviati on	t	р
	Total Words/Tota 1 number of T-unit	Pre- test	6.96	3.04	7.09	1.49	- 0.14 5	0.886 n.s.
		Post- test	9.98	4.08	7.80	1.65	2.1 42	0.04 2*
	Total Words/The number of clause	Pre- test	31.65	15.99	35.2 6	17.18	- 0.36 6	0.720 n.s.
		post- test	3 1.41	11.72	44.1 9	22.5 7	- 1.76 8	0.096 n.s.
	Total Words/The Number of Error-Free T-unit	Pre- test	1 0.82	4.80	24.5 3	17.20	- 2.31 9	0.03 0*
		post- test	30.26	18.08	16.2 2	5.78	2.9 46	0.00 6**

Table 3 The Fluency Result of English Writing of Class A and B in the Pre-test and Post-test

P>0.05= Class A and B are not significantly different, n.s.=not significant; P<0.05= Class A and B are significantly different, * =significant; P<0.01= Class A and B are very significantly different, **= very significant.

First, the ratio of total words to total number of t-unit. In the pretest, the mean of Class A is 6.96, standard deviation is 3.04; the mean of Class B is 7.09, standard deviation is 1.49. Independent sample t-test shows there is no difference between Class A and Class B. In the post-test, the mean of Class A is 9.98, standard deviation is 4.08; the mean of Class B is 7.80, standard deviation is 1.65. Independent sample t-test shows there is significant different between Class A and Class B. A further comparison of the mean value found that the mean of Class A is higher than that of class B in the post-test.

Second, the ratio of total words to the number of clause. In the pre-test, the mean of Class A is 31.65, standard deviation is 15.99; the mean of Class B is 35.26, standard deviation is 17.18. There is no difference between Class A and Class B in the pre-test. In the post-test, the mean of Class A is 31.41, standard deviation is 11.72; the mean of Class B is 44.19, standard deviation is 22.57. There is no difference between Class A and Class B in the post-test. There is almost no difference in the mean of Class A between pre-test and post-test (pre-test 31.65, post-test31.41); there is an 8.93 more in the post-test than in the pre-test in the Class B. In all, there is no significant different between Class A and Class B. Background music teaching has no significant influence on Class A and Class B.

Third, the ratio of total words to the number of error-free T-units. In the

Pre-test, the mean of Class A is 10.82, standard deviation is 4.80; the mean of Class B is 24.53, standard deviation is 17.20. The mean of Class A and Class B shows significant difference. In the post-test, the mean of Class A is 30.26, standard deviation is 18.08; while the mean of Class B is 16.22, standard deviation is 5.78. The mean of Class A and Class B shows very significant difference. The post-test score of Class A surpasses the pre-test score of Class B and is much higher than the post-test score of Class B.

4. Discussions

The results shows that: 1) Background music teaching can improve the accuracy of English writing effectively, and its influence is better than traditional teaching. 2) Background music teaching can not enhance the fluency of English writing. Its influence is inferior to traditional teaching. Next, starting from Krashen's "Affective Filter Hypothesis" and Wolfe-Quintero 's research[15]and combining with the characteristics of the two kinds of teaching, we deeply analyze the above results

Compared with the results of the pre-test and post-test, it can be seen that the background music teaching has significantly improve the writing accuracy of Class B, while the accuracy of the traditional teaching of Class A is reduced.Learner factors are divided into affective factors and competence factors.Emotional factors have a great impact on people's cognitive resource pool. For example, the increase of anxiety will lead to the contraction of the total amount of cognitive resources. Reducing students' anxiety can help them to release the cognitive resource space. When form and meaning compete for limited cognitive resources, writing, as an output task, should be prioritized for its significance. If the available resources are effectively expanded, the improved cognitive resources during the task completion are also increased, resulting in better monitoring of the content of the writing output, and thus improve accuracy[16,17].Background music teaching can create a relaxing atmosphere and relieve students' tension and anxiety to enhance students' accuracy of English writing. Lexical, morphological, syntactic and punctuation errors also deserve our attention. In terms of lexical errors, the post-test of traditional teaching is 48(increase 7%) more than that of in the pre-test, while the lexical errors in the post-test of background music teaching is 39 (decrease 23%) fewer than that of in the pre-test. After one semester's study, it shows that students in background music teaching relieve and decrease anxiety, thus they can use vocabulary correctly in relaxing and pleasant atmosphere; while the lexical errors in traditional teaching increase, it is because students' anxiety can not be relieved in traditional writing. In terms of syntactic errors, the post-test in traditional teaching is 43 more than in the pre-test, while the post-test and pre-test in background music teaching are almost the same, which shows that background music teaching can effectively restrain the increase of syntactic errors. In terms of punctuation errors, Background Music class increased punctuation errors indicate that participants have been concerned about the accuracy and fluency of sentences, ignoring the correct use of punctuation. The punctuation errors in both classes in the post-test increase or even two times than in the post-test, which could not be ignored.

From the perspective of writing fluency, the background music teaching has no significant impact on the students' performance, and the performance of the students in the traditional class is better than the background music class. Let's look at the ratio of total words to total number of t-unit: in the pre-test, there is almost the same mean between Class A and Class B and there is no significant difference of the two classes in independent sample t-test; in post-test, the mean of Class A increases greatly, while that of Class B enhances slightly, there is significant difference between the two classes. It shows that the sentences written by the traditional teaching students in the post-test are longer than that of in the background music teaching students, and the students in the traditional teaching make greater progress than students in the background music teaching is nearly 3 times higher than the pre-test average, and the post-test in background music teaching is significantly

lower than the pre-test, indicating that the background music teaching has hindered the development of students' writing fluency. According to Wolfe-Quintero 's research [15], different language systems are involved between fluency and accuracy: accuracy requires learners to use rule systems for syntax processing, while fluency requires learners to use the memory system to extract existing language blocks. Therefore, to ensure the fluency of language output, language information should enter long-term memory, so that learners can successfully extract it with minimal attention resources whenever needed, and conscious speech output practice is the key to ensure that language information enters long-term memory[18]. Students do not have enough information about English writing storage in their mind, therefore, background music teaching hinders students' English writing fluency. In addition, it shows that background music interferes with the development of students' fluency: for students with good study habits, they will try to eliminate external interference when studying hard. Because they have developed the habit of concentrating on their study from an early age. Therefore, they may actively avoid interference in the writing process.

To obtain more accurate results, this study make a questionnaire entitled "Impact of background music on study / work", and participants include students in background music teaching classes and six other parallel classes, with five single-choice questions and one subjective question. A total of 313 questionnaires are distributed and 313 are recovered. The summary of the questionnaire results can reflect the influence of background music teaching on students from another side. The following are questionnaire questions and survey results.

Question 1. Do you listen to music when you are studying or working ? Those who listen to music when study or work are 76, taking up 24%; sometimes listen to music when study or work are 217, taking up 69%; never listen to music are 20, taking up 7%. In other words, playing background music to study or work place is accepted by most people.

Question 2: If background music is playing in your study or work place, can you speak out the name of music? Those who could speak out the name of background music while listening were 22, taking up 7%; those who could speak out some of the music are 274, taking up 88%; some could not speak out any background music are 14, taking up 4.5%. One participant does not fill in this question. We can assume that: those who are influenced are the sum of the first and the second options, that is 95%.

Question3.Can you hum the melody of the background music while studying/working? Those who could hum all the music are 33, taking up 10.6%; those who could hum some of the music are 255, taking up 82%; those who could not hum any music are 22, taking up 7%. One participant does not fill in this question. We can assume that: those who are influenced are the sum of the first and the second options, that is 92.6%.

Question 4: Can you complete tasks on time with background music playing? Those who could not finish the task with the background music are 8, taking up 3%; those who could finish the easy task with background music and could not finish hard task with background music are 155, taking up 48%; those who could finish any task with background music are 156, taking up 49%. One participant does not fill in this question. We could assume that: those who were influenced are the sum of the first and the second options, that is 51%.

Question 5: When you are studying or working, do your moods up and down with background music? Those who are influenced by background music are 62, taking up 20%; those who are sometimes influenced by background music are 180, taking up 58%; those who are never influenced by background music are 69, taking up 22%. We could assume that: those who are influenced are the sum of the first and the second options, that is 78%.

Question 6: What do you think of background music when you study or work ? (Positive and negative) please list the reasons. 167 people, 58% of participants believe that background music could bring positive effects;

58, 20% were neutral; 16, 6% thought it had negative effects. 46, 16%, did not answer the question. Conclusion: the majority of people believe that background music facilitate work efficiency and do not affect people's study or work.

To sum up, people who listen to the background music are mostly influenced by it. It also shows that objective facts and people's subjective concept are obviously inconsistent: people like to study or work in a relaxing and pleasant environment with background music, but they do not know at all they were distracted by it! The results further proved the previous data analyses: background music could distract people from work or study. This conclusion challenged the concept "background music is conducive to creating a good atmosphere, so that students can relax, overcome anxiety, generate a sense of pleasure, and achieve the maximum teaching effect[1]."

5. Conclusion

The paper studies the influence of The Influence of Background Music Teaching on the Accuracy and Fluency of College Students English Writing in China. It shows that: firstly, background music teaching can enhance the lexical accuracy of college students' English writing and can effectively suppress syntactic errors, but has no significant effect in reducing morphological errors and punctuation errors. Background Music class increasing punctuation errors in the post-test indicates that participants have been concerned about the accuracy and fluency of sentences, ignoring the correct use of punctuation. Morphological errors are almost the same in the pre-test and post-test in the two classes. Second, background music teaching hinders the development of the participants' English writing fluency. fluency requires learners to use the memory system to extract existing language blocks. Therefore, to ensure the fluency of language output, language information should enter long-term memory, so that learners can successfully extract it with minimal attention resources whenever needed, and conscious speech output practice is the key to ensure that language information enters long-term memory. Students do not have enough information about English writing storage in their mind, therefore, background music teaching hinders students' English writing fluency. Besides, for most people, they are used to working or studying in a quiet atmosphere, background music may distract their attention and decrease fluency of English writing.

For teachers, they should give students more opportunities to practice English writing and enrich writing variety to inspire them to write. At the same time, teachers should also develop students' correct writing skills and habits to improve writing fluency. This can not only improve the writing effect of students, but also stimulate students' interest and motivation in English writing, and enhance their sense of ease and sense of achievement.

Students should accumulate many more good sentences, recite more excellent composition and fixed expressions to use them in English writing practice. Students should also increase the practicing frequency and conquer dilemma before English writing to eliminate negative impact in mind, so as to extract relevant information fluently in mind to improve English writing quality.

In spite of detailed analysis and elaboration as well as repeated modification, this thesis still has its limitations. In terms of sample selection, more number of subjects can be selected, and the writing process of the participants can be strictly supervised to obtain more effective samples and enhance the representatives of the research results. In terms of genre selection, this study uses narrative writing, and future research writing genres can be rich and diverse; In terms of research duration, this study is only one semester, and the future research duration can be one year or even two years to discuss more deeper the influence of background music on the writing accuracy and fluency of freshmen in non-English majors.

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