How peer review affects Chinese adult college students’ English writing acquisition in a computer assisted online learning environment?

Chunlin Yao$^{1,2,*}$

$^1$School of Foreign Languages, Tianjin Chengjian University, Tianjin, China
$^2$The Research Centre of Education Development for South Xinjiang, Kashgar University, Kashgar, China

*Corresponding author e-mail: yao_chunlin@yahoo.com

Abstract. This is an experimental study investigated whether a peer review teaching method is suitable in a computer assisted online learning environment for Chinese adult college students in their English writing acquisition. The research results show that the teaching approach of peer review in a computer assisted online learning environment is beneficial to learners of enhancing their writing levels and it is appreciated by most learners. The peer review teaching method aids learners to check their papers from a different perspectives and increases their interests and confidence in their English writing, which is beneficial for them to revise their papers and improve the content and organization of their writing. However, a few learners dislike this kind of teaching method. They prefer their writings to be evaluated by some better writers, even English native writers. In order to maximize the advantages of a peer-reviewed teaching method and minimize its disadvantages in a computer assisted online learning environment, a systematic training to learners about peer review is necessary, which is beneficial to Chinese college students in acquiring English writing abilities better with the assistance of a computer.

1. Introduction

With the fast development of the society, computer has entered into almost all parts of the world. With the help of computer, human beings’ lives become convenience and effectiveness. Taking education as an example, with the assistance of computer, learners, especially adult learners, can learn by themselves at anywhere and anytime, which makes knowledge learning a more convenient and interesting activity. In recent year, more and more Chinese adults went to adult universities. According to the data issued by National Bureau of Statistic of China, there were 12,293,212 adult learners studying in over 1,500 universities [1]. According to the requirements of the People’s Republic of China the quality of adult college graduate students are the same as other college students. They are required to complete their adult learning tasks by studying and working part-time within three to four years. That is to say, the adult college learners must complete all the courses that other college students are required to complete.

Foreign language (English) acquisition is a compulsory course for adult college learners in China. Adult college learners lose the critical period of learning a foreign language (in China, English) and they are not in the same learning environments with other students (part-time working-and-learning vs.
full time learning). Therefore, the challenges that adult learners face, and the strategies and resources they use to overcome those challenges, might be different from those that younger learners usually experience and apply. Among different aspects of English acquisition, writing acquisition is the most difficult one for Chinese students, including Chinese adult learners. The document entitled *The 13th Planning of Education Informatization* issued by the Ministry of Education of the People’s Republic of China delivered believes that a computer assisted learning environment is a potential method of fostering learners’ foreign language practical abilities, including writing abilities. However, this concept is only a hypothesis, as no scholar has verified it. Therefore, how to enhance Chinese adult college learners’ English writing abilities with the help of a computer is an essential task for English teachers or researchers in China.

2. Literature review

2.1. Computer Assisted English Acquisition

Computer assisted learning can be traced back as early as 1960s. At the initial time computer assisted learning was widely popularized and accepted within companies due to its effectiveness, adaptability and flexibility, and thus is gradually applied in traditional school education. Many scholars have focused their studies on computer assisted English acquisition. Neumeier establishes the models in a computer assisted language learning environment. In his learning environment there are some similar elements with a traditional learning environment, such as the involvement of learning subjects, learning objects, teaching methods and assignments. At the same time, there are some special elements in a computer assisted learning environment, such as learning location, teaching mode and its integration [2]. Shih reports that learners are satisfied with a computer assisted language learning environment and they believe that a computer assisted language learning could rise their learning effectiveness as this kind of learning environment motivates their learning activities [3]. Garrison and Vaughan focus their study on the teaching model in a computer assisted language learning environment and they have designed at least six illustrative scenarios of teaching in a computer assisted learning environment [4]. Computer assisted learning environment has different sub-kinds, such as forum based learning environment, blog based learning environment, wiki based learning environment, and so on. Miyazoe and Anderson examine the effectiveness of three different sub-kinds of computer assisted online-based writing activities in formal university education. Their study reports that learners prefer a wiki based learning environment, while a forum based learning environment attracts few learners. A blog based learning environment lies between the aforementioned two learning environment [5].

2.2. Peer review in foreign language writing acquisition

English acquisition is a compulsive course for Chinese students, from primary schools to universities. Therefore it is an essential task for scholars and educators to invent teaching methods to improve learners’ English performance. Currently scholars find that the essential factors that determines the success of a foreign language acquisition are learners themselves rather than educators. Many researchers, therefore, believe that the teaching method of peer review is a potential way to enhance learners’ second language (L2) writing abilities [6–7]. The teaching method of peer review is different from a traditional teaching method. In a peer review teaching method learners’ conducts are not evaluated by their instructors but by their peers [6]. Many researchers believe that the peer review teaching method matches second language writing acquisition better. DiGiovanni and Nagaswami indicate that online peer review could become an exciting new teaching tool available to both teachers and learners with the help of a networked or virtual classrooms’ environment [7]. Based on the aforementioned literature, the current study has summarized two characters of peer review. Firstly, a peer review teaching method in foreign language writing acquisition is a multi-direction teaching method, which increases the opportunity of communication among learners. In a traditional teaching method, one teacher or instructor gives his or her feedback to all learners in a writing task, in which learners have few opportunities to negotiate with their teacher or instructor. Even they disagree with or do not understand their teacher’s or
instructor’s feedback, they are unwilling to talk with their teacher or instructor because of their teacher’s authority. However, in a peer review teaching environment learners can negotiate with their reviewers freely. Thus, a one direction learning approach has been changed into a multi-direction learning approach. Secondly, in a peer review learning environment a learner can get feedback more promptly than in a traditional teaching method. In a traditional teaching method one teacher or instructor is required to give feedback to many students. Thus it is difficult for the teacher to give the feedback promptly. In a peer review teaching environment after a learner finishes his or her writing he or she can get the feedback from his or her peers immediately. Foreign language writing in a peer review teaching environment has a more immediate interaction between writers and readers.

Some previous studies have revealed that the peer review teaching method is workable to enhance learners’ writing abilities [6-7]. Traditionally, foreign language teaching in China is in a teacher-centred class. Students prefer learning under an authority. They hope a teacher in charge of their learning activities. Whether a peer review teaching approach benefits Chinese college students (especially Chinese adult college learners) or not in their English writing, is still in the dark. Therefore, the current study will examine the effectiveness of a peer review teaching method in a computer assisted online learning environment to Chinese adult college students’ English writing acquisition.

3. Research procedures and research results

The study uses a pre-test, post-test experimental randomized control group design with one experimental group exposed to a computer assisted online learning environment and a control group to a traditional learning environment.

Before the beginning of the teaching semester, learners in two teaching classes are required to write two papers within two hours. Then four teachers (Dr Cao, Dr Qiao, Professor Zhang, and Professor Yao) evaluated the learners’ English writing abilities. T-test examination revealed the mean score was 72.4 VS. 73.3. The further analysis results showed that there were no significant differences between learners in the selected two classes ($p = 0.0897 > 0.05$). The statistics results in table 1 reveal the similarities vividly. These two classes are selected as experimental class (EC) and control class (CC) randomly. Each class has 40 learners, respectively.

Table 1. The pre-test results of the differences of English writing scores.

| class | mean | Sig (2-tailed) | Std. Error Difference | 95% Confidence Interval |
|-------|------|----------------|-----------------------|------------------------|
|       |      |                |                       | Lower Bound | Upper Bound |
| Score | 1    | 72.4           | .897*                 | 1.432       | -3.220      | 4.621      |
|       | 2    | 73.3           |                       |             |             |            |

*The mean difference is significant at the 0.05 level.

In the following semester, one teacher taught both the control group and the experimental group from September 2017 to January 2018. All the teaching activities are in a computer assisted online learning environment. In the teaching process, the teacher delivers the learning materials online and the adult learners study the materials online either. All the adult college learners are required to learn eight topics in one semester, two weeks for each. After they finish one topic they are required to write a paper. In the whole semester, all learners finished eight papers. In CC the teacher reviewed all learners’ paper; while in EC learners’ papers were reviewed by their peers. At the beginning all learners in EC were grouped quintupled. Each group reviewed the other group’s papers in the whole semester and their papers were reviewed by other groups either. Usually in a review process the whole group worked together for reviewing other’s paper. If their opinions toward one paper were different from each other and no one could persuade others, they had the opportunity of consulting their teacher online. Then their teacher would express her opinion toward the paper. She was also required to evaluate all opinions in the group toward the paper.

At the end of the semester, all learners took part in their final examination, which were required to finish two papers within two hours. The same judges (Dr Cao, Dr Qiao, Professor Zhang, and Professor Yao) evaluated all the papers. Then the learners’ writing score were analysed by a computer. The T-test results revealed that those in EC got a significantly higher mean score than those in the CC (80.2 vs. 75.8; $P = 0.000 < 0.05$). The statistics results in table 2 reveal the differences.
Table 2. The pre-test results of the differences of English writing scores.

| class | mean   | Sig (2-tailed) | Std. Error | Difference | 95% Confidence Interval |
|-------|--------|----------------|------------|------------|-------------------------|
| Score | EC     | 80.2           | .000*      | 1.548      | 1.247 - 3.563           |
| CC    | 75.8   |                |            |            |                         |

*The mean difference is significant at the 0.05 level.

After the quantitative analyse the study tried to interview some learners about their opinion on the peer review teaching method. As Chinese learners are unwilling to comment on their teacher’s teaching activities to their teacher directly, the study chose a volunteer from the learners as the interviewer. After getting one day training the interviewer reviewed some learners in EC. The review question is very simple, which is about the learner’s viewpoints regarding the peer review teaching method. The reviewer is required to write down the view results anonymously.

4. Discussion
The pre-test results reveal that peer review can improve Chinese adult college students’ English writing abilities in a computer assisted online learning environment. The review results show learners’ opinion about peer review in a computer assisted online learning environment. In general, students hold a positive viewpoints towards the new teaching method. However, someone points out its limitations either.

4.1. Peer review in foreign language writing acquisition
Most students believe that a peer review teaching method in a computer assisted online learning environment can benefit learners in the following four aspects.

Firstly, a peer review teaching method with the help of a computer in English writing broadens learners’ eyesight about life and inspire them in English writing. Some students state that because of the lack of life experience they have no idea of how to start a paper. Therefore, they tend to write some meaningless sentences or write around few points repeatedly. As a result, their paper is usually dull to read, even in their own eyes. With a peer review teaching method, students can learn from their peers, which broadens their eyesight about life and eventually inspires them in English writing.

Secondly, peer review helps learners to familiar with the English writing structures. English writing is different from Chinese writing in article structure. The beginners usually adopt Chinese paper structures in their English writings as they are not familiar with English discourse patterns. They do not know how to start an English paper, how to write a topic sentence and how to combine some sentences into a paragraph coherently. They even cannot notice the aforementioned problems when they write their own papers. In reviewing their peers’ paper, they can notice the problem clearly. Therefore, the peer review process would help learners to rethink different ideas about the given topics and the ways to develop the structure of their writing rationally and clearly.

Thirdly, the peer review process gives learners the chance of reconsidering the given topic from an audience’s perspective. Looking at the same topic from different perspectives learners can get different opinions. These different opinions assist learners in their English writing greatly. Mangelsdorf points out the benefits of a peer review process to learners directly. According to him this teaching method reinforces the writing task’s real function of communication and the interchanging role between writer and reader makes the writing activities more authentic [6].

Fourthly, in a peer review teaching process most time learners are evaluated by their peers, who has the similar English abilities. In this learning environment it is easy for learners to build a strong learning confidence and learning interests. Previous study has verified that emotional factors such as motivation, self-confidence and anxiety tend to cause learners’ psychological obstacles if they learn in a bad learning environment and learning aims in some way determine learners’ learning emotions [8]. Usually Chinese learners hold a pragmatic view to their learning activities. Passing exams or finding a good job locate in the top of their learning aims. With this learning purpose most of Chinese learners usually regard foreign language writing as a headache task. They are not interested in writing in a foreign language. If they get a negative feedback in their writing, they will lose their confidence.
gradually. In a peer review teaching environment with the assistant of computer and internet learners are required to participate in their learning actively rather than passive sponges. Passing an examination is less important than learning activities itself, as Rollinson points out that a peer review process cultivate some critical readers, which help learners have the skills of self-reliant writing and self-editing [9].

4.2. *The limitations of the peer review teaching method*

A peer review teaching method is beneficial to Chinese adult learners in their English writing. However, this teaching method has its disadvantages to them either, which can be illustrates as follows.

Firstly, some learners looked down upon this teaching method as they do not believe their peers have the abilities to evaluate their papers. In their opinion only those mastered better English such as their English teachers or an English native speakers have the quality to be a reviewer of their papers. They don’t think they can get good even right feedback from their peers. Maybe their learning philosophy is just that only an authority figure with “correct” English knowledge is qualified to become the reviewer of their papers.

Secondly, some learners dislike a peer review teaching method as they think the review process consumes them a lot of time. They believe that the time consumed in the review activities can be spend in other meaningful learning activities. They regard all review tasks in the review process such as reading their peers’ paper, making notes, and writing comments as meaningless activities.

4.3. *Potential ways to minimize the limitations of the peer review teaching method*

A peer review teaching method in a computer assisted online learning environment has its advantages and limitations to Chinese adult college students. If teachers can maximize the advantages and minimize its limitations, a peer review teaching method in a computer assisted online learning environment would benefit Chinese adult college students in their English writing acquisition. After a comprehensive analysis, the current study finds that setting up an effective peer view procedure and an adequate training can alleviate the aforementioned potential problems, both practically and pedagogically. The training includes informing learners the basic principles of peer review activities and some effective measures to interact or respond to a paper. Only with such effective training, can a peer review teaching method in a computer assisted online learning environment be destructive and useful to its learners.

Most Chinese adult college learners were taught in a traditional learning environment. Usually their opinions were against a peer review teaching method, especially those who were used to learning in a teacher-centred learning environment. At the same time those learners were not familiar with the new teaching method. They even did not know what should they do and how should they do in a peer review teaching method. Teachers, therefore, are required to teach learners not only English knowledge but also the skills in reviewing others’ papers. After a short period when learners become familiar with the peer review teaching method, they may enjoy the benefits of a peer review teaching method in a computer assisted online learning environment.

In addition teachers are required to adjust learners’ prejudice against a peer review teaching method. It is true that the peer review process consumes a lot of time, but the time in the peer review process is worthy enough. The review process is also a learning process, in which they can reconsidering the writing process and learn from their peers.

After some training, some learners would change their opinions towards the peer review activities gradually and do peer review carefully. At the same time, teachers should try to appreciate learners’ peer review task and help them to cultivate confidents. In this way it is no doubt that learner will change their opinions toward peer review and enjoy this kind of teaching method.

5. *Conclusion*

The current study finds that peer review in a computer assisted online learning environment has its advantages and disadvantages, and the advantages surpass its disadvantages. A peer review teaching method in a computer assisted online learning environment is beneficial to learners of enhancing their writing levels and is appreciated by most learners. A peer review teaching method aids learners to
check their papers from a different perspectives and increase their interests and confidence in their English writing, which is beneficial for them to revise their papers and improve the content and organization of their writing. However, a few learners dislike this kind of teaching method. They prefer their writings being evaluated by some better writers, even English native writers. In order to maximize the advantages of a peer review teaching method in a computer assisted online learning environment and minimize its disadvantages, a systematic training to learners about peer review is necessary, which is beneficial to Chinese college students in acquiring English writing abilities better in a computer assisted online learning environment.

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