



The Impact of Synchronous and Asynchronous Online Peer Review Activities on Students' Academic Writing Skills

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ABSTRACT

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Peer review activities have a positive effect on improving the students' writing skills. This paper aims to investigate the impacts of online peer review activities which were conducted synchronously and asynchronously. Pre-test was administered before the training to determine their level of academic writing skills before the treatment. Then, to get the data a total of 70 students were divided into two groups. 35 students were trained to do online peer review activities synchronously, while the other thirty students practiced to do the asynchronous online peer review. After having peer review exercises, they were given a test on how to do the peer review to measure whether the participants had the skills to do the peer review. The students were asked to review their peers' essays in the next step. Before, they were given a post-test on writing an essay on the topic. The pre-test and post-test results were compared to know the impact of the peer review activities. The finding shows that students' academic writing skills have improved. However, those who practiced the synchronous online peer review activities had better scores in their academic writing than those who conducted asynchronous online peer review activities. Thus, it can be concluded that online peer review activities positively improved the students' writing skills.

Keywords:

Writing skills, essays pre-test, post-test.

I. INTRODUCTION

In some schools, peer review activities have been used. According to some researchers' findings (Gielen et al., 2010; Bijami et al., 2013; Farah, 2012; Baker, 2016), these activities can help students write better. Peer review is also intended to encourage the writer to reevaluate the entire document (Chisholm, 2006). Peer review training positively impacted the students' subsequent revisions, according to a study on the subject that was conducted in Iranian (Esmaeeli, Hadiseh; Abasi, Maasumeh; Soori, 2014). Peer review activities force students to interact with peers who provide feedback on how to improve their final drafts of writing.

Peer review activities must be implemented after training. It has been determined that a study on preparing student reviewers is worthwhile (Rahimi, 2013). Peer review is used in writing classes at my institution, but there is inadequate instruction given to the students on how to do it.

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Peer review is therefore not as helpful, despite the fact that some studies suggest that peer review activities can enhance students' writing skills. Students have positive attitudes toward peer review activities, according to a study I conducted on students' perceptions. They still believe that teacher-centered activities are preferable to student-centered ones, and they do not feel that peer review activities are a good use of their time because they take place during lesson time (Aydawati, 2016). They do not, however, feel that they are able to mark the writing adequately. Peer review, on the other hand, fosters favorable attitudes toward writing (Min, 2006).

However, students need instruction to perform peer review. Many students demand feedback and even criticism right away. However, until they have had another experience of simply sharing for a while and then using non-evaluative questions, they are not yet capable of giving or receiving (Fountaine & Elbow, 2003). Practice peer reviews are therefore necessary. This essay seeks to evaluate the effects of the peer review tasks completed by the students following their instruction in online peer review tasks.

II. REVIEW OF LITERATURE

While writing is an essential form of communication, learning to write takes time and is regarded as the most challenging language skill. It is a helpful tool for learning and contemplation. It seems that writing is the fundamental link that holds our society's systems of education, culture, and commerce together.

According to Irvin (2010), academic writing is a form of assessment that requires students to demonstrate their knowledge as well as their mastery of specific disciplinary thinking, interpreting, and presentation skills. Additionally, writing fosters independence, comprehension, fluency, and creative writing in students. Elbow (1998) explains the concept of writing as follows: "Writing is not a way to transmit a message, but a way to grow and cook a message." This means that writers need specific skills to put their thoughts into words in a meaningful form and to interact with the message mentally. Writing is a way for people to think about things they couldn't have thought about when they first started. Writing is actually a verbal exchange through which people liberate themselves from their current thoughts, feelings, and perceptions.

Peer review activities, which involve using other students as sources of information and having students take on the roles and responsibilities typically held by a teacher, tutor, or editor who has received formal training, can help students improve their writing skills (Liu & Carless, 2006). Peer review activities involve having students comment on and critique each other's drafts in both written and oral formats. When they possess the necessary information and abilities, learners can serve as sources of information. According to Storch (2005), peer review adheres to the social constructivist model of learning. He also thinks that despite peer review's solid foundations, its use in the classroom is quite constrained.

Both synchronous and asynchronous processes can be used for this online peer review. Haslan (2017) provides a definition of synchronous and asynchronous. Online courses that require both students and instructors to be online simultaneously are known as synchronous courses. There is a set time for lectures, discussions, and presentations. To participate, all students must be online at that precise time. He also explains how to recognize the differences. The exact opposite is true of asynchronous classes. The materials, lectures, exams, and assignments given by the instructors are accessible at any time. Students might be assigned a time period during which they must connect at least once or twice. This period of time is typically one week. However, in general, students are free to participate whenever they want. Students can typically take part in online courses thanks to asynchronous learning. Both synchronous and asynchronous peer reviews are carried out online to meet the objectives of this study.

Asynchronous online discussion was reportedly found to be beneficial for "encouraging in-depth, more

thoughtful discussion; communicating with temporally diverse students; holding ongoing discussions where archiving is required; and allowing all students to respond to a topic" in a survey of educators (Branon & Essex, 2001, p. 36), as cited in Johnson (2006). This demonstrates that asynchronous learning may be more beneficial because it gives students time to reflect more deeply prior to or following a review. According to a study on synchronous and asynchronous communication in the teaching of English as a second language, both types of computer-mediated communication have unique discourse features that can be used for various pedagogical objectives (Sotillo, 2000).

III. PROBLEM FORMULATION

There are two issues that are discussed in this research. The first is whether the online peer review practices can improve the students' writing performance. The second is to see which online peer review is more effective: synchronous or asynchronous online peer review.

IV. METHODOLOGY

The study was undertaken in two groups of Academic writing, group S and group A. In this class, the students learned how to write different kinds of essays during the semester. The objective of Academic Writing class is to write an article. In the beginning of the class, the students were trained on doing online peer review. For the purpose of this study, they were given different treatment. group S was treated with synchronous online peer review. group A was treated with asynchronous online peer review.

These two different classes consisted of 35 students. For the experiment, the writer conducted five meetings to train the students on the way to do the synchronous online peer review to group S. Then, the students did the asynchronous online peer review twice. By practicing for several times, the students are assumed to have the ability to do the online peer review activities. The revision that the students did after the process of online peer review were scored. The same experiment step was done with group A which was trained to do asynchronous online peer review

To get the answer to the problems, the result of pre-test and post-test from both groups was compared to know whether the treatment given (peer review activities) had an impact on the students' writing performance.

The students' score of the pre-test and post-test of each group was also compared to know the more appropriate way to do peer review activities. The class that showed better improvement was considered more appropriate to enhance the students' writing skills.

V. RESULTS

Before the students were given treatment of online peer review, they were asked to write a cause-effect essay on the topic given. This was the pre-test step. The scores gathered

were used to compare with the result of post-test score gained after treatment.

Then, the experiment was started by giving the two group different treatment. The result of the online peer review practices showed that they could do the activity. The training was given five times, and the result of the training was scored. The students had to use the template to do the peer review. There were two different templates used. The first one was used for the students to review the organization of the writing. They were asked to choose the comment provided. The second one was on the grammar which consists of some items. They had to give comment whether the sentence was correct or incorrect. When they decided that the sentence was incorrect, they had to choose the reasons, for example the form of the verbs, the use of article.

On the fifth meeting the lowest score was 81 which can be assumed that they knew how to do the peer review. Then, they practiced to review their partner's essay as it can be seen below.

Table 1. The Score of peer review practice.

N		Group S	Group A
	Valid	35	35
Mean	69.375	64.8571	
Minimum	81	83	
Maximum	92	90	

The data was taken from the score of the fifth online practice. This data was used as the students were able to do the peer review. The minimum score of group S was 81, while group A was 83. Therefore, the students were able to do online peer review activities to review the essay writer by their pairs. Finally, they were given post-test, and the score was compared with the pre-test score to know whether the online peer review had impact on improvement the students' writing performance. This can be seen from

To know which method is better, then the researchers saw from the independent t test, as follows.

H0: There is no difference between synchronous group and asynchronous group.

H1: There is a difference between synchronous group and asynchronous group.

Based on the test results using a 5 percent significance level, it can be said that the syn class and async class have a significance value of $0.362 > 0.05$. Thus, it can be said that there is no significant difference between the synchronous and asynchronous classes. However, there was still difference.

Based on the test results, seen in table 1, the average score of students who had been given synchronous treatment was greater than the score of students who had been subjected to the synchronous teaching method, which is 63.4857 compared to 61.6286.

Table 2. The Mean score of Pre-test and Post test

	N	Pre-test mean	Post-test mean	Difference
Group S	35	58.257143	63.4857	5.228571
Group A	35	59.514286	61.6286	2.114314

It can be concluded that synchronous online peer review had better impact to the students' writing skills. Therefore, it was suggested that writing teachers should ask the students to do the synchronous peer review

Table 3. The Mean score of Synchronous and Asynchronous

	N	Mean	Std Deviation	Std Error Mean
Group S	35	63.4857	8.80298	1.48789
Group A	35	61.6286	8.11711	1.37204

Based on the test results, it can be seen that the average score of students who have been given synchronous treatment is greater than the value of students who are subject to the asynchronous teaching method, namely 63.4857 compared to 61.6286.

VI. CONCLUSION

Based on the discussion above, it can be concluded that online peer review practices have impacts on the improvement of the students' ability to write an essay in Academic Writing class. This is proven by the better scores they get in the post-test compared to in the pre-test.

Additionally, group S who was trained to do the online peer review synchronously have shown better score in the post-test compared to those trained with asynchronous online peer review.

VII. DISCLOSURE

The authors report no conflicts of interest in this work and have no financial interests or other conflict that relate to the research.

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