

Examining the Effects of Peer Review via the Computer-mediated Communication Device

Ai-Hwa Chen

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Abstract

For the purpose of exploring the effects of peer review conducted in the mixed ability EFL writing class, fifty English major students from a technological university participated in this project. The peer review activity was conducted in two sessions. Student reviewers were asked to provide different review comments for each session: general comments and targeted revisions. In addition, they needed to give feedback during and after the peer review activity. The findings showed that most students were fond of the activity. Although students enjoyed working on their peers' drafts, a few did seem disinclined to make suggested changes to their own writing based upon peer revisions alone, and still desired added oversight from the teacher. This seems to imply that the peer review activity is feasible in a mixed-level EFL writing class, provided appropriate teacher guidance is also available as a kind of added assurance.

Key words: peer review; mixed ability class; collaborative writing; asynchronous CMC mode

藉由電腦輔助溝通裝置檢視同儕互評的效果

摘 要

本計畫旨在探討同儕互評在不分程度差異的英文寫作班實施的效果，有五十位科技大學英語系的學生參與。同儕互評活動分成兩階段，第一階段提供一般的評語，另一階段則給予指標性的修正建議。此外，參與的學生在活動進行前、進行中及結束後，必須提供回饋表。研究結果發現大部分的學生對活動持正面的態度。雖然許多學生喜歡協助修正同儕的文章，一些學生卻不願意依據同儕提供的建議修正自己的文章，他們較傾向於由老師協助文章的修正。因此，同儕互評活動可以在寫作能力不一的課堂實施，但須搭配老師從旁的協助。

關鍵字：同儕互評、不分程度差異的班級、合作寫作、非同步的電腦輔助溝通模式

1. Introduction

Peer review can be an effective tool in the process of refining student's writing skills since many studies have discussed the positive benefits it brings to ESL and EFL writing classes and have attained positive results through the use of the computer-mediated communication (CMC) tool (Kamimura, 2006; Chen, 2012; Chang, 2012). In this study, all peer review activities were carried out in a language lab equipped with online accessible computer devices. In addition to exploring EFL writers' perspectives on the peer review activity, this study will also examine the two different reactions reflected by the student reviewers involved the comments they made while constructing their revisions.

Before conducting this research project, the teacher/researcher asked the participants how they completed their papers. About 90% of the participants admitted that they usually would not start their composition assignment until the day before the due date. In this, several did not complete their compositions in time. In addition, most students did not reread their papers or ask someone to edit their drafts before submitting them to their teacher. Thus, the first and last drafts sometimes were actually the same copies of the composition. They also would not share their papers with one another. In such cases it was clear that they had no concept of the peer review process. They apparently considered the teacher as the only legitimate reviewer for their writing assignments. Instead of treating the writing assignment as a crafted work, most students just wanted to get it over with and earn the course credit. For the purposes of helping students improve their writing skills and better appreciate the papers composed by their peers, two kinds of peer review activity were carried out in this study. Fifty mixed ability EFL college English majors participated into this project. They gathered at the language lab situated at a technological university regularly and spent two hours weekly reviewing their peers' texts and providing comments. In addition, after revising their own papers, their peers would give the papers an editing. The students were then required to do a final edit and then submit their accomplished works.

Most of the students had no prior experience in conducting their writing works collaboratively. It was expected that the students could not only obtain useful writing strategies from their peers, but also learn to give appropriate and constructive comments. Most importantly would be that they could thereby learn that the team work also can be used in the writing class. With the assistance of the teacher and peers, hopefully, students might thus come to reinforce their writing skills and become more responsible and effective writers.

Peer review activities have been carried out in the writing classrooms for years and have been shown to be effective for the teaching of writing skills. Some studies

indicate that ESL/EFL students consider peer feedback as a beneficial activity to reinforce their writing abilities (Keh, 1990; Rothschild & Klingenberg, 1990; Tsui & Ng, 2000; Kamimura 2006; Chen 2013). For example, Kamimura (2006) explored the nature and effectiveness of peer feedback in EFL writing classrooms. Twenty-four high- and low-proficient Japanese university freshmen who majored in English participated in the study. It was found that peer feedback had overall positive effects on the compositions of both the high- and low-proficient students. In the findings of Chen's study (2013), it also revealed the positive effects of conducting peer review activity in the EFL writing class. Twenty-four English major students agreed that the peer review activity was helpful to improve essay writing skills. In the process of peer review, they had read various kinds of peers' papers. Thus, they learned their peers' writing style or were able to avoid making the same grammatical mistakes. They also indicated that they could share their stories with peers.

In addition to employing a face-to-face mode in peer review activities, numerous researchers (Sullivan and Pratt, 1996; DiGiovanni and Nagaswami, 2001; Liu and Sadler, 2003; Tuzi, 2004; Jones, et al, 2006; Ware and Warschauer, 2006; Guardado and Shi, 2007; Odom, et al, 2009; Choi, 2014) have shown their interest in a synchronous and asynchronous CMC modes and conducted successful online peer review activities. Some researchers also reported their satisfactory results in the EFL writing classrooms when using CMC peer review. For instance, through blogs, Ciftci and Kocoglu (2012) investigated the effect of online peer feedback on Turkish EFL students' writing performance and their perceptions. 30 Turkish EFL students were evenly divided into control and experimental groups. The results revealed that the students in both the control and experimental groups improved their writing in their revised drafts. However, those in the experimental group, which utilized blogs showed higher performance in their revised drafts. In addition, the analysis of interviews and end-of-semester questionnaires indicated positive perceptions on the use of blogs in writing classes. Likewise, Chen (2012) also conducted a peer review activity in the EFL writing classrooms with the blog-based mode. The study setting was an undergraduate English Writing course taught at a technological university in central Taiwan. This study used a learning management system (iMS) weblog created by the university's technical group. The students were required to submit their writing assignments, exchange peer-review comments, and revise their writing projects based on the feedback they had received. The findings suggested a promising direction of using web-based peer review in EFL writing classrooms to help students improve their academic writing abilities. In addition, the weblog peer review process appeared to be a positive experience for both the students and the instructor.

In this study, based on the asynchronous CMC mode, the researcher examined the

perspectives EFL writers had on two different kinds of comments generated from two sessions of peer review practices. Some researchers have discussed the effects of synchronous and asynchronous CMC modes on improving writing skills ability. In Pai's (2008) study, fourteen Taiwanese English-major freshmen who enrolled in a reading and writing class were grouped into seven pairs to conduct peer review activities with Google Docs (Google Documents) and Google Talk as the review tools. The findings suggested that it is feasible to implement computer-mediated peer review into foreign language writing classes. In addition, the delayed response time was valued by most of the students who were not experienced in peer review activities. Asynchronous comments may be a good peer review starter for student writers. Chang (2012) examined how a combination of three modes (face-to-face, synchronous, and asynchronous CMC) influenced students' peer review. The results suggested that a combination of different modes in the multiple-draft process may benefit peer review and satisfy individual preferences towards the mode used for peer review. Furthermore, student reviewers are usually unprepared for such a challenging task and this may result in certain problems, such as giving vague or unhelpful feedback. Thus, in order to make peer review an even more effective and beneficial activity in the writing classrooms, some researchers have embarked upon attempts at training students to become more successful peer reviewers (Hu, 2005; Liu & Hansen, 2002; Min, 2005, 2006).

The participants in this study were all from vocational high schools with different English levels and educational backgrounds. By means of peer review activity, hopefully, students can work collaboratively with their peers to improve their writing skills. The current study attempts to address the following research questions:

1. How do the students perceive the peer review activity?
2. How do the students perceive their peers' feedback?
3. How do the students perceive as the appropriate editor(s)?
4. How does peer review activity facilitate students' writing skills?

2. Methods

Different from many studies focusing on one form of giving comments in the peer review activity, in this study, the participants were asked to complete two kinds of peer feedback: comments giving and targeted revision suggestions. In this, participants who were originally from different educational backgrounds with different English proficiency level might assist one another cooperatively. Supplemented with the e-platform set by the university's technical group, participants were asked to upload their writing assignments, peer-review comments, and feedback questionnaires to the system.

The teacher/researcher collected all of the materials to realize EFL writers' perspectives on the effects of peer review activity through the use of computer-mediated communication tool.

2.1 Research Site and Participants

This study was carried out in a required English writing course for English majors at a technological university in central Taiwan. This class met once a week for two hours in a language lab. Fifty sophomores, comprised of 18 males and 32 females from various academic backgrounds which included English, Food and Beverage, Tourism, Information, and International Business in their senior high school originally participated in this project. About 50% participants were English majors; i.e., it was a typical mix ability English writing class. Participants were divided randomly into two groups assigned by the English department and there were 25 students in each group. In addition to having different class schedule, two groups had the same offerings, such as the writing instructor, class requirements, composition assignments, and learning progress. All participants did not experience to compose English papers prior to this class because their courses offered in their freshman year aimed at general English learning, such as pronunciation, reading and vocabulary, grammar, and listening drilling. Therefore, they were all first time EFL writers who were to work on the one paragraph writing task. The course primarily focused on learning the basic format of a paragraph, sentence structure, grammar review, and punctuation usage.

2.2 CMC Instruments: E-platform and In-house Microsoft Word System

Peer review activity was conducted in two different ways: peers' general comments and targeted revisions via CMC application which was an in-house Microsoft Word system. By means of the e-platform established by the university, participants uploaded and downloaded papers written by themselves and their peers to provide one-to-one e-comments. The activity was conducted online anonymously. Afterwards, students composed another paper and were paired for making corrections for their counterparts using the "New Comment" function installed under the "Review" instruction built in the computer system. All original and revised e-papers were downloaded and uploaded through the CMC device. In addition, while the project was in progress, all feedback questionnaires in the form of e-materials were also given to students in time.

2.3 Data Sources and Collection Procedure

2.3.1 Two writing tasks

Both of the writing tasks were conducted in the language lab. After completing writing papers with personal computer equipped in the lab, the students needed to upload their writing works to the e-platform. They were allowed to use an e-dictionary but not the sentence translation function built in to complete 150-200 word essays in one hour. The topic for the first writing task was “Spring Break.” The topic for the second writing task was to select one of the three traditional festivals in Taiwan as a subject theme.

2.3.2 The collection of peer review comments and targeted revisions

Two kinds of peer review activities were conducted for the two writing tasks. For the first session, student reviewers read and gave overall e-comments to their peers. Student reviewers were asked to revise their counterpart’s draft for the second writing session. After completing the peer review activity, the student reviewers needed to upload their comments and revisions to the e-platform.

2.3.3 Instructor’s comments

In addition to uploading their own papers to the e-platform, students had to submit a hard copy to their instructor to read. In this, the instructor would then give feedback and return them to the student writers.

2.3.4 Students’ feedback

Three students’ feedback: peers’ comments giving, reflections on peers’ comments, and perceptions on the peer review activity, were collected in the first session of the peer review. While constructing the online paper reviews, the students were simultaneously given a feedback survey to examine if the papers were on the right or wrong track, the overall clarity of the composition, and their perceived effectiveness of the comments that were made. The anonymous feedback was then returned to the writers. After reading the comments given by the peers and re-reading their own papers, the students were asked to express their thinking about their peers’ comments on their own writing works. The questions involved their agreement with the comments given by the peers, the papers that they may or may not have subsequently edited in response, followed by their comments on the overall effects of peer review activity. Once

completing the online peer reviewing, students were asked to provide their perceptions about the preference of the activity and the ways in which the peer review had been conducted.

There were two student feedback collected in the second session of the peer review. After reviewing the papers composed by peers, students were asked to edit their own papers based on the revisions suggested by their peers. In the feedback, they needed to reflect upon their perceptions of the usefulness of the editing, and the conceptions about their revised paragraphs. At the end of the semester, students were asked to complete a final feedback questionnaire about their overall perspectives about the peer review activity.

2.3.5 Data collection procedure

In this study, 70% of the students had part-time jobs. In order to lessen their workload and assure the quality of writing skills learning, all writing practices and activities were conducted in the language lab through the CMC application. Before beginning the peer review activity, students needed to compose their own papers, upload them to the e-platform, and submit a hard copy to the teacher/researcher. The papers with teacher/researcher's comments would return to student writers afterwards. In addition, the teacher/researcher showed them how to give general comments and targeted revisions through employing the functions built in the Microsoft Word system. Students had to skip to review their own papers in the process.

In the first session, student reviewers needed to download the feedback sheet on their computer from the e-platform and the teacher/researcher downloaded students' papers which were uploaded a week ago and projected them on the computer monitor so that student reviewers could read the same paper together. When finishing reading each paper, the monitor would be switched to students to give general comments. After giving the comments, student reviewers were asked to upload the peer feedback to the e-platform anonymously. All of the writers' names were concealed with sequential numbers. Student reviewers would read four papers with comments giving each week and there were twenty four papers in total. Thus, the peer review activity took six weeks to complete. At this moment, students were given a survey feedback to indicate their opinions about the activity. In addition, the teacher/researcher collected, organized, and printed the peer feedback out, and gave it to the student involved. While receiving the feedback given by their peers, participants were asked to edit their own papers based on the peer feedback. They also needed to express their perspectives about the comments they received. In this, the first session was completed.

For the purpose of examining the effects of peer review between the general

comment giving and actual targeted revisions, the students had additional peer reviews that included grammatical corrections. Therefore, contrasts to reviewing 24 peers' papers, in the second session, participants were paired for reviewing their counterpart's paper with targeted revision suggestions. Likewise, student writers would receive their counterparts' feedback and modify their own papers. When the activity of peer review was completed, participants were asked to give an overall feedback.

2.4 Data Analysis

Based on the proposed research questions, the teacher/researcher designed five feedback questionnaires; three of them were employed in the first session and the other two in the second session. In the process of conducting the peer review activity, participants were asked to complete two writing papers and five feedback forms. The teacher/researcher collected all questionnaires, had responses calculated and categorized, and then analyzed what perspectives the students had about the peer review activity through their feedback as well as their responses to reviewers' comments and targeted corrections. The students were required to upload five feedback questionnaires in the process of conducting the peer review activity. In addition, by means of comparing the original draft with the edited copy revised by the peers, the researcher was able to examine the effects of peer review in terms of the different fashions of review (general comments and targeted revisions) that were employed by the EFL college students.

3. Results

3.1 The Perspectives of Peer Review Activity

For the first session of peer review, after conducting online peer review and making general comments anonymously but not yet receiving comments from reviewers, students were asked six questions to express their opinions about the preference of activity implemented in the first feedback questionnaire. Four of them were multiple choice questions including: 1) basic responses to the activity; 2) preferred way to perform it; 3) reveal name in feedback; 4) preferred commentator, and two were open-ended questions: 1) the problems student encountered in conducting the activity and 2) student reflections upon self writing process.

Student responses to the preference of activity implemented are illustrated in the Table 1. It indicates that most students liked the peer review activity (88%), and preferred conducting in computer-based (93%) and anonymous (95%) way. They also

preferred to receive comments that were provided by both the teacher and their peers. Although the percentage of those who felt that comments provided by the teacher were valuable was higher than that of those who found their peer's comments worthwhile, most students (71%) tended to find value in having their peers join the activity.

Table 1. Student responses to the preference of activity implemented

item	option	percentage(%)
responses to the activity	like vs. dislike	88 : 12
preferred way to perform it	computer-based vs. paper-based	93 : 7
reveal name in feedback	anonymous vs. named	95 : 5
preferred commentator	teacher vs. peers vs. both	24 : 5 : 71

The problems student reviewers encountered in the process can be categorized into three main areas: the adequate delineation of grammatical errors, difficulty in understanding the intent or theme of the texts, and questioning their own self reviewing abilities. Some students indicated that they generally could recognize incorrect grammatical usage; however they doubted that they could supply their peers with correct revisions because of their limited grammar knowledge. Which is to say that they often could see when certain sentence structures were wrong, but had trouble explaining exactly why.

Other students claimed that they had difficulties in understanding some of their peers' writing. They pointed out that some of the student papers were presented in almost another language to them. And still others, about 30%, of the students questioned their own evaluation abilities and were afraid of providing their peers with incorrect or misguided comments.

Concerning students' reflection upon self-writing process, many students would adopt elements of their peers' writing themes into their own texts after reading peers' papers. Most students, however, focused on grammar correctness for their own writing papers. They indicated that they needed to reinforce their grammar and vocabulary and that peer reviews were useful for doing this. So, most students appreciated having the opportunity to benefit and learn from their peers' papers.

3.2 Students' Perceptions on the Comments Given by Their Peers

Student reviewers were asked to review all peers' papers and make general written comments about the papers. Two set of questions, one for student reviewers another for student writers, would be sent to all students after the student writers received their written comments from the student reviewers.

Two questions were asked for the student reviewers: 1) Is the paper on/off the track?; 2) Do you feel that you adequately understand what the paper is about? The responses related to the questions are illustrated in the Table 2.

Table 2. The responses of student reviewer after making general written comments

item	option	percentage(%)
paper correctness	on vs. off track	64 : 36
paper comprehension	yes vs. no vs. a little	57 : 14 : 29

Table 2 shows that 64% of the students stated that their peers' papers were on the right track. Although the percentage of those seen to be on the off track was lower, 36%, it indicated that roughly one in three of these papers was seen to be off track. This implies that at least one third of the students were perceived as having difficulties in remaining on the correct direction. 57% of the students indicated that they could understand their peers' composition well and another 43% could not, or could only understand the papers in part. At this point, it seems clear that peer review pointed out that many of the participants could not understand the papers due to the poor language usage and their author's inadequate or insufficient English abilities.

After reading the comments given by their peers, the student authors were asked to reflect upon their feelings regarding the observations. At this point, four questions were asked: 1) Do you agree with the comments given by your peers?; 2) Will you use the comments to edit your writing?; 3) After doing the peer review activity, do you think it may become easier to edit your own paper?; 4) Whom do you prefer to have comment upon your writing, the teacher, your peers, or both? The responses to the four questions are indicated in the Table 3 below.

Table 3. The responses of student writer after receiving general written comments

items	option	percentage(%)
agree with the comments	yes vs. no vs. half and half	64 : 19 : 17
use the comments to edit	yes vs. no	79 : 21
easier to edit your paper	yes vs. no	52 : 48
teacher vs. peers vs. both		65 : 0 : 35

More than half of the students (64%) indicated that they agreed with the comments made by their peers, only 19% disagreed while 17% had no strong preference. For the question 2, surprisingly, even more students (79%) indicated that they would follow their peers' advice on editing the drafts. They indicated that it would be more helpful if their peers could point out the specific incorrect parts

directly. For the question 3, although most students (88%, as shown in the Table 1) were fond of the peer review activity, only approximately half of them (52%) thought that editing their own drafts had thereby become easier. When the question about the appropriate editor was asked again, the result was opposite to the prior one. Most students (65%) tended to choose the teacher (as shown in the Table 3). Why did the result become different? Will the comments affect students' preference on reviewers' selection? Before conducting the second peer review activity, students were asked, "whom do you think is the more useful source to help edit your draft: the teacher, your peers, or both the teacher and your peers? 30% of the students selected the teacher, 2% their peers, and 68% both. It seems that their expectations at this point roughly mirrored their reactions to the first exercise.

3.3 Students' Perceptions Regarding the Targeted Instruction Given by Their Peers

While student writers were reading the comments given by their peers, many of them indicated that they still were not able to locate the incorrect parts to make the revisions by themselves. Instead of general observations, they preferred receiving specific corrections. Therefore, the second session of peer review focused upon making targeted corrections. Students worked in pairs to do the editing and performed the targeted peer review for the counterpart. In this case, the paired students knew one another's names.

Before beginning the second session of peer review activity, the students were asked two questions: 1) was it necessary for you to revise your draft several times? ; 2) will it help if your final draft is revised by someone else? All of the students gave positive responses. They claimed that it was a courtesy for reviewers to have papers carefully edited. Also, the targeted peer review could help them recognize the "blind spots" on their drafts.

When students received their drafts edited by their peers, they would modify them and send the final draft to the teacher. In addition, they needed to compose a final feedback about the activity. The questions for this were: 1) Do you like the activity of editing?; 2) How do you like the way (computer-based or paper-based) of editing the paper?; 3) Did you give your peer good editing?; 4) Did your peer give your text good editing?; 5) How will you deal with the corrections provided by your peer?; 6) Was your paper improved after several revisions?; 7) Who is the best editor? Student responses of final feedback are illustrated in the Table 4 below.

Table 4. The student responses of targeted peer review

item	option	percentage(%)
like the activity	yes vs. no vs. so so	46 : 2 : 52
the way of editing	computer-based vs. paper-based	91 : 9
being a good editor	yes vs. no	76 : 24
having a good reviewer	yes vs. no	80 : 20
corrections provided by peer	accept all vs. decline vs. accept some	29: 12 : 59
paper improved after revisions	yes vs. no vs. so so	73 : 5 : 22
the best editor	teacher vs. peer vs. both vs. writer	64 : 17 : 12 : 7

According to the Table 4, the first question shows that nearly half of the students (46%) were fond of the editing activity, only 2% disliked, and more than half (52%) felt 'so so'. It is evident that most of the students were not against the targeted peer review. In the question two, it shows that 91% of the students preferred computer-based to paper-based review which is consistent with the general-comment review as shown in the Table 1. In question three and four, they both reveal similar credibility situations for being a good editor (76%) and having a good reviewer (80%), less than 30% were not positive in the questions. A few students (20%) claimed that their peers did not give them helpful suggestions. However, some of them still chose to accept some revisions given by their peers. The fifth question reveals that 'comments accept all' dropped to 29% (64% in general-comment), comment decline decreased to 12% (19% in general-comment), and 'comment accept some' jumped to 59% (17% in general-comment). More excitingly, the sixth question shows that 73% claimed their paper was improved after several revisions while only 5% negated on this. And the seventh question shows again that the teacher was considered to be the best editor (64%) among the peer review environment options (peer 17%, both 12%, and writer him/herself 7%). This is consistent with the questionnaire after receiving general-comment review (65% teacher, peers 0%, and both 35%). But it is different from the first questionnaire, after uploading general-comment review but not yet receiving comments from reviewer (24% teacher, peers 5%, both 71%).

4. Discussion

4.1 Perspectives on Peer Review

Two sessions of peer review activity, general comments giving and targeted revision, were conducted in this study. The first session of the peer review process was very time consuming because the students needed to read and give comments for every

single paper involved. It took six weeks for student reviewers to complete the reviewing work. As shown in the Table 1, most (88%) of the participants were fond of the activity. They indicated that, not only could they read many papers and learn about their peers' writing styles, but that, in referring to the errors made by their peers, they also could try to avoid making the same mistakes themselves. Students preferred adopting computer-based to paper-based media for conducting the writing practice. This is also true in the second session. Some detailed discussion on this will be revealed in the follow section. Also, students prefer the review to be conducted in anonymous way which can be easily accepted because of human nature. However, it seems that this activity was somewhat limited because the student's peers did not give them substantial and specific corrections but more general suggestions. Many students stated that the main purpose of conducting the peer review activity would be to help their peers to correct grammatical errors so as to compose better written papers.

In the second session, the students worked in pairs to edit their counterpart's composition, in this case students all knew one another's names. Surprisingly, comparing the Table 1 with Table 4, the percentage of satisfaction in performing this activity declined dramatically from 88% to 46%. Still, the negative response drop from 12% to 2% either. The percentage in between yes and no climbed up from 17% to 52%. It seems that knowing their partner's name was not something that they expected. However, most of them indicated that in this situation they worked more seriously on their peer's papers. This, again, probably because of the name is revealed; they received better edits in return.

The third and fourth questions in the Table 4 revealed similar credibility situations for being a good editor (76%) and having a good reviewer (80%), less than 30% were not positive in the question. A few students (20%) claimed that their peer did not give them helpful suggestions. However, some of them still chose to accept some revisions given by their peers. This confirms that knowing the name of each other have positive contribution to the performance of the peer review activity. Comparison of question one in the Table 3 and question five in the Table 4 showed reviewer comment be declined drop from 19% (general review) to 12% (targeted review) but accept all or partial revisions given by their peers increase from 81% (general review, 64% accept all, 17% accept some) to 88% (targeted review, 29% accept all, 59% accept some). It seemed that students were willing to take comments and make revisions to their own papers in this setting. Review comments with more specific corrections, targeted peer review achieves better acceptance from the writer than general peer review. More excitingly, the sixth question in the Table 4 shows that 73% claimed that their paper was improved after several revisions while only 5% negated on this. At this point, it corresponds to the teacher's feedback on students' revised tasks. After conducting the revising process,

students became more alert on grammar and mechanics usages, such as tenses, the sentence structure, and punctuations. It proves that the targeted peer review is an effective approach for English writing practice. Due to the complicated situation of the seventh question about who the best editor was in the Table 4, it will be discussed in section 4.3.

In order to help keep the students motivated on refining their writing skills, the teacher assigned five different activities for students to employ in the writing class. The types of the activities included: news comment, sentence correction, process writing, class lecturing, and peer reviews. Those activities were conducted alternately during the semester. At the end of the semester, students were asked to rank their preference of the activities. The rate of preference for each activity is presented in the Table 5 below and labeled from the most to the least preferred activity. Table 5 revealed that peer review was generally considered to be the most favorite activity that they engaged in. More importantly, it was ranked far higher than the other four activities.

Table 5. The statistics of preference for five different writing activities

peer reviews	: news comment	: sentence correction	: process writing	: class lecturing
46%	18%	16%	14%	6%

This indicates that the activity of peer reviews was greatly favored despite its potential for becoming quite repetitive in nature. It is worth to mention that although the activity of process writing was ranked as the second least preferred item, most students did become familiar with the process writing practice.

4.2 Writing Tasks Assisted with CMC Device

The peer review activity was conducted thoroughly through the use of a computer-mediated communication system. Under a paperless learning environment, students worked hard on reading their peers' writing works on a computer screen. They also learned how to use the New Comment tool installed in the computer to edit their peers' papers. After completing each designated task, they needed to upload it to the e-platform so that their accomplished works could be saved for future use. When students were asked in which method they preferred their peer review to be conducted, the computer-based method or the paper-based, more than 90% of the students preferred computer-based fashion. The same question was asked twice and the response remained the same each time. And, the reasons for preferring the computer-based method can be categorized into three groups: 1) recognition on environmental concern because it could reduce paper usage; 2) it is more convenient to use the computer to save the files or make corrections without vexing at printing out different versions of draft; 3) reducing

the risk of loss of the paper copy to and fro the classroom and home. Only one student remained firm in conviction involved hard copy. Her reason was that the printed copy is easier to read and edit. Thus, this indicates that this study was conducted with an appropriate teaching device.

4.3 The Appropriate Editor

In the process of conducting the peer review activity, one question was repeatedly asked to examine who students felt the best editor was. The results are demonstrated in the Figure 1.

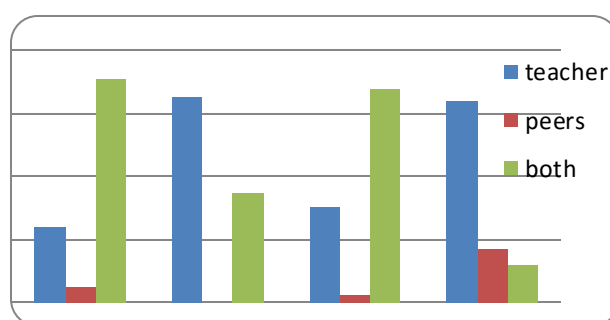


Figure 1. The best editor presented in each survey

Figure 1 indicates that in the first questionnaire, student reviewers just finished general review and uploaded comments but no one received comments yet. The combination with both the teacher and the peers was considered as the best editor at this stage. However, for the second questionnaire (after reading comments given by their peers), the teacher became the best editor and peers alone was not selected. For the first questionnaire, all students contributed to providing comments and felt proud of being the reviewers. Thus, the combination with both the teacher and the peers was the best editor at this stage. However, for the second questionnaire, after reading comments given by their peers, the teacher became the best editor. Before implementing the second session of peer review, the same question was asked for the third time and the best editor returned to both the teacher and peers again. And, at the final feedback questionnaire (after finishing targeted peer review), the teacher was the best editor again. Why did a significant change occur? While conducting the peer review activity, many discouraging and critical remarks were made about these papers, such as the fact that they demonstrated incorrect grammar usage, had incomprehensible contents, and strange sentence structures. Writers might have uncomfortable feeling on this negative feedback given by their peers not from their teacher. Consequently, the notion of who would serve as the best editor was changed from the combination of the teacher and

peers into the teacher alone. This apparently indicates that the comments did affect students' preference on reviewers' selection. And, by the end of the project, most of the students had come to feel that the teacher was the most appropriate editor for students' writing attempts all in all. This points out that, ultimately, in students' mind the teacher continues to be seen as playing the most important role in the process of peer review instruction and editing. In the end, teachers are still seen to be the most legitimate final arbiters of student's writing and paper editing efforts.

4.4 Weaknesses of the Study

Having too many student papers to read in a limited time would often make reviewers stressed and tired physically. In order to finish reading and giving comments in time, some students would provide similar comments on different papers, unless the papers involved were distinctive, such as extremely well written, or conversely, very poorly written. Many of the students positively approved of the peer review activity and indicated that they liked receiving peer assistance in helping them to identify their writing problems. At the same time, a significant number felt that it had become a tedious and time consuming task, particularly in terms of the sheer number of papers that needed to be reviewed.

After receiving targeted revisions provided by their peers, many students were inclined to partially or totally follow the advice that had been provided. Students were asked to make final revision by themselves after they received the targeted editing from their peers. However, in many cases the students only changed those parts of their texts that had received editing, but left the remaining of their original paper essentially unchanged. Thus what they submitted were not completely reconstructed essays, but more like first drafts cobbled together with intermittent revisions. In this, they were ignoring the teacher's request; they did not take the final step to complete their process writing. It seems that students took the advantage on peer review process without taking the final step of submitting fully re-worked writings.

5. Conclusion

Two sessions of peer review activity had been done successfully in this paper. One is the general peer review. Student reviewers had to review all peers' papers and give general written comments concerning them. It was conducted in an anonymous way and students did not know who reviewers or writers were. Another is the targeted peer

review. Students worked in pairs to edit their counterpart's paper and give specific corrections. In this case, the student reviewer was exposed. Before the study, 88% of the students liked the idea of receiving peer review of their writing efforts. However, only 46% of the students actually liked peer edits once they had received them. Many students agreed with the comments given by their peers, as most comments were related to grammatical issues. In such cases, many students indicated that they felt grammar was their weakest point in writing. Nevertheless, they often complained that their peers did not give them practical or concrete suggestions. They claimed that they needed specific and utilitarian corrections. Some students stated that their peers gave either incorrect revisions or confusing ones. Inversely related were instances in which students uttered that they could not edit their peers' works because their contents were confusing and even unintelligible. As such, is it appropriate for the writers with limited English ability to participate into the peer review activity? This study was a mixed ability class, in which approximately one fifth of the students had poor performances in writing. Other class members had abilities that ranged the spectrum from adequate to outstanding. How can writing instructors deal with such situations?

88% of students accepted all or some of the comments from targeted peer reviewers and 95% of students claimed that their paper was improved after several revisions. That gives a thrust to the effectiveness of targeted peer review activity. Also, good credibility situations, more than 75%, for both being a good editor and having a good reviewer, revealed that the targeted peer review activity is quite successful. This confirms that knowing name of each other for both writer and reviewer has positive contribution to the performance of the peer review activity.

The last interesting result from the two sessions of peer review activity found that teacher is the best editor. It means that the teacher always plays a key role in helping students build up their English writing capability.

All of the students initially agreed with the idea of repeated peer revision, but their rate of satisfaction with it declined when it was conducted in reality. The concentration span of contemporary students seems to be becoming shorter. In this study, some students needed to be reminded constantly not to access to FB (facebook) or use their i-phones while conducting the peer review activity. Like the cook trying to serve various dishes to please different customers' tastes, the teacher/researcher in this study also prepared various writing activities for students to conduct. Offering students various activities in exchange for tedious and difficult writing tasks seems to be one effective way to motivate their work ethic. However, one prerequisite is to give student reviewers appropriate training before they undertake peer editing. As Berg (1999) and Liu & Hansen (2002) indicated in their study, English is not their native language but a language that they are learning. It is necessary for EFL learners to know the skills of

peer review. Once they are familiar with it, they may feel more comfortable with working on collaborative writing projects with their peers when given appropriate underpinnings in peer editing techniques. Students tend to work harder and will readily produce more satisfactory work. Significantly, although it is a tedious and tiring task; among the five activities that the teacher/researcher brought to this program, the students universally felt that peer review was unquestionably the most interesting activity. Thus, students may be not happy with the lengthy and demanding work but they nevertheless genuinely enjoy working with their peers collaboratively. It is important to stress that humans are fundamentally social animals and that working together at collaborative learning seems to appeal to the majority of students in very fundamental ways.

5.1 Pedagogical Implications

Most students positively liked the activity of peer review because they could read their peers' writing works which tended to demonstrate many differing writing styles and concepts. Most importantly, while reading the papers, they found that they often made some of the same mistakes as their peers did. This thus prompted them to become more cautious for their next writing tasks. As students played the role of reviewers, they became more independent and responsible EFL writers. However, in the mixed ability class, although almost all students gave positive responses on the activity, the effects of the peer review activity may not have wholly positive results for the lower achieving students or those with insufficient language skills. In this study, a few students could not write and read well enough for their peers to furnish worthwhile comments or help edit their texts because of the incomprehensible writings. Nor could they make particularly useful editing comments in return because of their own relatively deficient writing skills. In this, teachers can and should design different writing tasks and set different requirements to meet individual students' needs.

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In this study, eighty-five percent of students believed that the purpose of

conducting the peer review was to focus on grammar corrections. And, they indicated that the overall comments without the actual corrections were not helpful and practical for improving their writing. Indeed, in this study, more than half student papers (76%) kept presenting certain common errors, such as tense problems, misspellings, and serious punctuation problems. Although the teacher had corrected errors repeatedly, some students kept making the same mistakes over and over. It seemed that the incorrect grammar concepts, in some cases, had become fossilized in their minds. Yet students not only need to enhance their grammar knowledge, they also need to be informed that the contents and the form of a paper carry equal weight. In this study, after completing the peer review activity, the teacher took some writing examples written by students and presented anonymously on individual viewing screens. The teacher then asked the students to be engaged in correcting the grammar errors collectively. This helped to resolve some problems, such as the format for a paragraph, or punctuation usage. All in all, encouraging students to write more holistic compositions presents a more comprehensive but potentially rewarding pedagogical challenge.

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Ai-Hwa Chen

Associate Professor, Department of Applied English

Hsiuping University of Science and Technology

E-mail: ahchen@hust.edu.tw