Peer Review in Scientific Writing Classes: A Comparison of L1 and L2 Usage

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Peer review has been repeatedly shown to have beneficial effects for students in different writing classes. However, the debate continues as to whether comments should be given in L1 or L2 for students to have more beneficial experiences. This research examines EFL peer review by focusing on the relationship between language usage and the types of feedback produced. A total of fifteen first-year science students engaged in ongoing peer review over one semester in an academic writing class. Students were given the flexibility of producing comments in L1 or L2. The comments collected were categorized into praise, criticism or suggestion according to previous study by the author. Overall, students showed an overwhelming preference for L1 usage and produced more criticism and suggestion. On the other hand, they produced more praise comments in L2 than L1. The ratio of suggestion among three comments was similar for L1 and L2. The frequency of L1 usage increased as time passed in the course. This paper concludes with teaching implications for implementing peer review in EFL academic writing classes.
たらすと言われている。しかし、より高い学習効果を実現させるためには、使用言語の選択が重要となる。コメントするに相応しい言語は、第一言語（L1）か第二言語（L2）か、その議論が続いている。本研究は、EFL環境においてピア・レビューの考察を目的とし、使用言語とコメントのタイプとの関係に焦点を当てる。学術ライティング授業一学期の間、大学一年生15人がピア・レビューを行い、言語は自由選択とし、コメントしたものを集めた。先行研究に基づき、コメントを三つのカテゴリ、称賛(praise)、批評(criticism)、提案(suggestion)に分類した。全体的に見ると、L1の使用が圧倒的に好まれた。L1の中、批評と提案コメントの数が、称賛コメントより多かった。一方、称賛コメントではL2の使用が多かった。提案コメントの場合、L1とL2の使用率はほぼ同じ。授業が経過するとともにL1使用の頻度が増加した。本論文ではEFL環境におけるピア・レビューの改善についての提案を試みる。

Peer review is commonly considered to be an essential part of the writing process, and it benefits both the reviewer and reviewee (Lundstrom & Baker, 2009). Writers do not improve simply from reading and writing, but from having their work read by another audience. Peer review is practiced by both professional and student writers in their first and target languages. Research indicates that unlike teacher feedback, which tends to focus at the grammatical level, peer feedback focuses more on the content and organization of the text (Paulus, 1999). It has beneficial effects on the quality of writing as well as on critical thinking, learner autonomy and social interaction among students (Jacobs, Curtis, Braine & Huang, 1998; Kitagawa, 1999; Yang, Badger & Yu, 2006). Therefore, peer review is a necessary skill for students of English to develop (Paulus, 1999).

Skillful reviewers are able to generate more global feedback such as comments about the content and organization of texts. On the other hand, less skillful reviewers tend to have a local focus and generate more rule-governed feedback such as comments about the linguistic features of the text (Stevenson, Schoonen & De Glopper, 2006).
Lee, “Peer review”

In addition to global and local focuses, there are also different types and classifications of peer review (Fazio, 2001; Hyland & Hyland, 2001; Lockhart & Ng, 1995; Mangelsdorf & Schlumberger, 1992; Min, 2005). However, feedback from peer review can be roughly divided into three types: corrections, commentaries, or a combination of the two (Fazio, 2001). Min further identified four steps in the peer review process: clarifying the writer’s intention, identifying problems, explaining problems and making specific suggestions. Hyland & Hyland (2001), on the other hand, suggested that review comments can be categorized into three functions: praise, criticism and suggestion.

Praise has an important role in developing motivation and confidence in students (Quinn, 2005). It constitutes positive comments which encourage the reoccurrence of appropriate writing characteristics, attributes or skills (Holmes, 1988). However, praise feedback needs to be credible and informative, as false praise is likely to discourage good writing (Cardelle & Corno, 1981, cited in Hyland & Hyland, 2001). What is more, premature praise may also confuse writers and discourage revisions. Criticism constitutes comments in which the reviewer expresses dissatisfaction with features of the text. It may place detrimental effects on writers, since negative comments are unfavorable and might not be accepted by writers. Therefore, the effectiveness of criticisms on writing varies depending on students’ willingness to accept review comments. Suggestion is the third category of comments. It is often referred to as constructive criticism because it has a positive orientation for text improvement (Hyland & Hyland, 2001). Among the three types of comments, past studies have suggested that praise comments are least common because reviewers tend to focus on negative aspects of the writing (Connors & Lunsford, 1993; Lee, 2010). Praise comments are however sometimes used to soften negative feedback because direct criticism can result in demotivating experiences (Quinn, 2005).

In previous research by the author (Lee, 2010), peer review was
examined by analyzing comments of 15 first-year science students in an academic writing class where they reviewed each other’s work weekly in the course of completing a research paper. The analysis ignored Japanese (L1) and English (L2) usage difference and instead focused on the classification system of Hyland & Hyland (2001)—praise, criticism and suggestion. Students produced the largest number of suggestion comments (78%), followed by criticism comments (17%) and then praise comments (5%) (Lee, 2010). However, the reason underlining students’ limited usage of praise comments was not revealed in the previous study. Nonetheless, an interesting finding derived from it was that many students used a mixture of Japanese and English comments in their peer review. There appeared to be some tendencies with students’ language choice and the type and depth of comments produced. Therefore, it is hypothesized that the student feedback comments may be related to their language choice.

While it may be beneficial to produce comments in English, as it provides practice of the target language for both reviewers andreviewees, the absence of the immediate need to use English for communication (in generating feedback remarks) demotivates students and may consequently discourage the usage of target language among students (Jacobs, 1987; Nelson & Murphy, 1993). Aside from any reported advantages of L2 peer review (Jacobs, Curtis, Braine & Huang; 1998; Kitagawa, 1999; Lundstrom & Baker, 2009; Yang, Badger & Yu, 2006), it has been shown to be disadvantageous because reviewers lack experience and language proficiency to produce concrete and productive comments (Min, 2005). Reviewees may perceive other learners of the target language to be unqualified and therefore distrust peer comments (Nelson & Murphy, 1993; Paulus, 1999). Similar to less-skillful writers, L2 reviewers would tend to focus on surface linguistic features and neglect higher level thinking (Cumming & So, 1996; Stevenson, Schoonen & De Glopper, 2006; Whalen & Ménard, 1995). Students also spend more time pausing while producing written
comments in L2 and consequently write shorter comments (Woodall, 2002). Studies against peer feedback further argue that reviewers often produce ‘rubber stamp’ comments or remarks which are misleading and thus deter reviewees from revision and rewriting (Bitchener, Young & Cameron, 2005; Goldstein, 2003; Guenette, 2007; Truscott, 1996).

On the other hand, L1 usage is a common mode of communication among L2 writers who perform peer review, as it helps writers to generate more ideas, develop concepts, organize information and accelerate the speed of task completion (Cumming, 1989; Kobayashi & Rinnert, 1992; Schoonen, Van Gelderen, De Glopper, Hulstijn, Simis, et al, 2003; Wang & Wen, 2002). Words and grammatical structures in L1 writing are readily available in an automatized way similar to L1 speaking (Schoonen et al, 2003). First-language review is advantageous for both reviewers and reviewees because they can communicate about writing in more depth in their native language (Tarnopolsky, 2000).

The present study examines the type of written feedback produced by students and their choice of languages in the process of peer review. It quantitatively analyzes students’ usage of L1 and L2 in relation to making praise, criticism and suggestion comments. In addition, it presents a description and analysis of some comments made by students.

Method
Description of Subjects, Course Curriculum and Data Collection

The present research was built on the preliminary study by the author (Lee, 2010) and involved first-year science students of mixed English speaking and writing abilities in an academic writing class of a Japanese national university. None of the subjects had experience with peer review prior to this classroom-based study. Over the course of 13 weeks, students wrote an experimental research paper based on their own experimental design and results. Students were informed at the beginning of the semester that peer review was a component for
their course evaluation. Subjects received peer review training at the beginning of the semester (week 1 to week 4), in which they practiced explaining differences between pre- and post-review pieces in L1 and then in L2. Individual teacher feedback was given to students with their first homework to demonstrate L2 review expressions. After the initial training period, students were asked to produce one section of their research paper per week for homework (week 5 to week 10) in the following order: introduction, method, results, discussion, abstract and complete draft (Table 1).

<table>
<thead>
<tr>
<th>Week</th>
<th>In class peer review</th>
<th>Homework 1</th>
<th>Homework 2 (Rewrite)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Introduction</td>
<td>Method</td>
<td>Introduction</td>
</tr>
<tr>
<td>7</td>
<td>Method</td>
<td>Results</td>
<td>Method</td>
</tr>
<tr>
<td>8</td>
<td>Results</td>
<td>Discussion &amp; conclusion</td>
<td>Results</td>
</tr>
<tr>
<td>9</td>
<td>Discussion &amp; conclusion</td>
<td>Abstract</td>
<td>Discussion &amp; conclusion</td>
</tr>
<tr>
<td>10</td>
<td>Abstract</td>
<td>Complete draft</td>
<td>Abstract</td>
</tr>
<tr>
<td>11</td>
<td>Complete draft</td>
<td></td>
<td>Complete draft</td>
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</tbody>
</table>

In each 90-min class, students spent approximately 30 minutes on peer review where they reviewed the content, language and format of another student’s writing. Reviewers were encouraged to make comments in English but were given the flexibility to use both languages. Reviewees were required to revise their writing each week based on comments received. Individual written teacher feedback was not given for students during the completion of the research paper. Overall, six
pieces of drafts with peer reviewed comments were collected from each student (abstract, introduction, method, results, discussion, and complete draft) at the end of the semester. The number of comments produced by 15 students was counted, and a qualitative analysis was conducted on some of the comments.

**Coding and Data Analysis**

According to Fazio (2001), peer review feedback includes corrections, comments, or a combination of the corrections and comments. The present study focused only on comments predominantly located at the beginning, end, or the side margin area of research papers. Direct grammar or linguistic feature corrections of the text were ignored as per Truscott (1996). Comments were treated differently from corrections because comments are more substantive and have different language tones. The Japanese comments were translated into English by the author, and then all comments were categorized into praise, criticism, or suggestion (Hyland & Hyland, 2001). Although some suggestion and criticism comments overlapped in this categorization, comments were classified as suggestions if they included words such as: need to, could, should, would, try, it is better to, it might be better, how about, such as and have to.

Comments that included both Japanese and English were classified into either language group according to the amount of language used (i.e., a comment for which more than 50% of the words were in Japanese was considered to be a Japanese comment). The frequency of L1 and L2 usage with each type of comment was calculated into percentages of all three types. A further analysis was also conducted on comments that appeared in each section of the research paper in order to look for tendencies in students’ peer review development as the semester progressed.
Results and Discussion

A total of 368 comments were collected from students’ writing drafts. Comments were categorized according to language and type in order to calculate the percentage of different comments per language. Overall, it was found that students used more L1 than L2, where almost three times the number of comments were produced in Japanese (Table 2). It was considered that students were reluctant at producing English comments because of limited vocabularies and grammatical structures (Schoonen et al., 2003). Although it is beyond the scope of this study to compare the effectiveness of L1 and L2 usage, studies have reported that students are more motivated and comfortable with L1 usage (Murau, 1993). First-language peer review may decrease anxiety and embarrassment among students and consequently accelerate class content and task completion speed (Schoonen et al, 2003). An analysis of students’ L2 comments indicates that students were more direct and in cases impolite with their feedback. Compared to direct and instructive L1 comments, students of this study used more hedged expressions in L2. For example, “isn’t it better to...” was a commonly used Japanese comment.

<table>
<thead>
<tr>
<th></th>
<th>Praise</th>
<th>Criticism</th>
<th>Suggestion</th>
<th>Total comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese</td>
<td>9 (3%)</td>
<td>55 (20%)</td>
<td>208 (77%)</td>
<td>272</td>
</tr>
<tr>
<td>English</td>
<td>10 (11%)</td>
<td>9 (9%)</td>
<td>77 (80%)</td>
<td>96</td>
</tr>
<tr>
<td>L1 + L2 comments</td>
<td>19 (5%)</td>
<td>64 (17%)</td>
<td>285 (78%)</td>
<td>368</td>
</tr>
</tbody>
</table>

Notes. Adapted from Lee (2010). Figures in parentheses are the percentages of each type of comment per row.
Lee, “Peer review”

Students produced the greatest number of suggestion comments in both L1 and L2. Compared to L2, students produced longer and more detailed comments in L1. Although very similar percentages of suggestions were recorded in L1 and L2 (77% and 80%, respectively), a qualitative analysis of comments indicates that the students were capable of producing higher level remarks in L1. Examples of L1 suggestion are shown below:

You are talking about the method in here. In your details: What is the suitable material for blocking heat? How about a combination of a number of materials. This is the kind of thing we include in here right? I am not exactly sure how to physically combine what combinations. Also, you would have to conduct an experiment on the principle elements if you want to carry out comparisons, right!? But it is not related here. Also, something for your future reference. Isn't it not such a bad idea that you put center the text and pay attention to the text font.

You have already deleted your highest and lowest values here. It might be better to specify here that you have deleted the values. It would easier to understand if you name your y-axis here as seconds. Also, it might be better to write down decimal points below zero here.

If this means that the formula is given to you, then isn't it maybe you shouldn't write formulas here.

Typical examples of L2 suggestion are shown for comparison below:

Maybe give some details of your results here.

Write detailed. The titles of graphs are placed bottom.
How? Detailed information is needed.

The greatest difference between L1 and L2 usage was recorded with criticism comments. The ratio of criticism among total comments was 20% for L1 and 9% for L2, a difference of more than twofold. The percentages support the earlier assumption that students perhaps felt more comfortable with using L1 when producing critical comments because first language usage enhances students’ higher-order thinking and the speed of writing (Cumming, 1989; Kobayashi & Rinnert, 1992; Schoonen et al., 2003; Wang & Wen, 2002). A qualitative analysis of L1 criticism comments revealed that students generally mitigated their comments and ended remarks with questions. For example, “This sentence is a bit too long, isn’t it?” Once again, criticisms in L1 also appeared more polite and sophisticated. Other examples taken from L1 criticism commentaries are below.

*It was difficult to understand it when I read it for the first time. Is 8% a number, you actually wrote use rate. It might be better to explain in a bit more details, especially in discussion and conclusion sections. For example, how about writing clearly about the time, line and direction?*

*Here is strange, if you want to say "to keep maintain something that was frozen", how about writing" keep something frozen"?*

*Two different things are mixed (“lift” and “flying for.” Overall, two ideas are mixed in here (lift and distance of flying). While you are writing that you are trying to find the relationship between these two points, you are writing your paper based on the fact that these two points are related. The purpose of your research is somehow ambiguous. Therefore, if might be better if you state that they have a relationship here.*
In the case with L2, students’ criticism comments were more direct and less hedged. Students of this particular writing class might simply lack enough training with producing hedging comments or sufficient L2 skills to soften the negative tone in their writing. Examples of students’ L2 criticism are shown as follows:

*This style is not suitable for academic writing.*

*You forgot double spacing.*

*You shouldn’t write this. This is not good.*

Unlike comments produced in L1, L2 comments had a stronger tone and ended up with fewer constructive remarks, without suggestions to make improvements on writing.

A total of nine and ten praise comments were collected in L1 and L2, respectively, but these numbers were not significant enough to make any generalization. Overall, praise comments in both L1 and L2 are short and did not elaborate on enough details. Examples of praise comments are shown below.

*This section has been written very well and I have enjoyed reading it. (L1)*

*This section is really good. (L1)*

*This is good. (L2)*

*This is perfect. (L2)*

*Good job. (L2)*

Although the number of praise comments is insignificant to make any generalizations, the ratio of praise comments to overall comments (see Table 2) might suggest that students have a higher tendency to
produce positive comments when writing in L2. Nevertheless, this assumption is also daring because a positive L2 usage tendency might have appeared because a limited number of L2 comments were collected in the study. However, if it can be proven that an L2-only environment would encourage students to make more positive comments which would stimulate intrinsic motivation toward learning (Deci & Ryan, 1985; Dörnyei, 2001), then it would be important for teachers to reinforce strictly English-only sessions in the writing classes.

It is assumed in this paper that students have gradually become more confident and skillful at peer review as the course progressed. The increase in students’ confidence is largely suggested by the generally increasing number of comments during the course (see Figure 1 to Figure 3). The increase, however, did not follow a completely linear pattern, and there were still variations in different stages of the semester. For example, L2 criticisms declined steadily, yet L2 suggestions rose then fell near the end of the course. According to the results, students produced the greatest number of comments for the discussion section and complete draft. That may have happened for the discussion section because it contained more input (i.e., reviewees had to elaborate their opinions) which invited more peer comments. The complete draft was simply the longest peer review assignment, so it automatically follows that it will have more comments than the other homework.

Although the number of comments increased in general, the record of Japanese comments was larger overall. This might be due to the fact that motivation for giving and receiving L1 feedback increased or even overrode motivation for L2 during the span of the course, since students were able to give and receive more detailed comments in their native language. With their increasing familiarity with the research paper structure, students may have been able to understand and concentrate better on the content and organization of text as time ensued, resulting in lengthier and more comments (Stevenson, Schoonen, & De Glopper, 2006).
Figure 1. Number of L1 and L2 praise comments in different sections of research paper. Sections are arranged in chronological order.

Figure 2. Number of L1 and L2 criticism comments in different sections of research paper.
Figure 3. Number of L1 and L2 suggestion comments in different sections of research paper.

**Conclusion and Teaching Implications**

This paper examined students’ language usage in peer review by focusing on the relationship between language choice and the type of feedback produced. Comments made by students were categorized into L1 and L2 as well as the usage of praise, criticism or suggestion. Although only a small number of subjects were involved in this study, three implications can be suggested for peer review practices in EFL academic writing classes.

First, despite peer review training at the beginning of the course, students showed a general preference for L1 usage and produced more detailed and constructive comments in L1. In order to encourage higher order thinking in students, teachers should not forbid the usage of L1 in peer review. This may pose problems for non-Japanese teachers who do not have Japanese proficiency.

Second, students probably need to receive more training in L2 peer review prior to and throughout the writing course so that they have target language vocabularies and expressions at their disposal.
Although it was found in this research that students have shown a nearly identical tendency to produce suggestion comments in either language, L2 comments were limited to surface features of writing. Peer reviewers also sometimes chose shorter and more direct L1 criticisms instead of applying L2. Therefore, the fluency of L2 might be improved in both categories of comments if more training were provided.

Third, teachers should constantly encourage students and emphasize the benefits of L2 usage in peer review. The number of Japanese comments increased as time passed in the study, as students increasingly experienced more constructive and detailed comments in the native language, both as a reviewer and reviewee. Science students such as those who participated in this study will undoubtedly face scrutiny of their written work in their careers, so understanding the process of peer review will help them to gain valuable knowledge for the future. Lastly, peer review may not only provide students with a venue for written feedback analysis, but it might also show them how praise, criticism, and suggestions can be conveyed in oral communication. In and of itself, this benefit cannot be understated.

References


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201-233.


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