

Measuring the Effectiveness of Training in Peer-assessment in an L2 Academic Writing Workshop: a Longitudinal Study

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Background

Writing essays is a really important skill for undergraduate students not only because this is a standard way of assessing students' knowledge at most universities, but essay writing is believed to promote higher-order thinking and is associated with learning. (Smith et al., 1999) Over the years, as teachers and researchers have investigated different methods for helping students to improve their writing skills, peer-assessment has been found to be an effective way to help students become better writers. (Berg et al., 2006; Boud et al., 1999; Davies, 2006; Plutsky & Wilson, 2005; Topping, 1998)

Peer assessment is the collaboration between pairs or groups of students for the purpose of judging each other's work in order to stimulate reflection, discussion, and learning. This form of collaborative learning has been defined as "the mutual engagement of participants in a coordinated effort to solve the problem together." (Roschelle & Teasley, 1995) Scardamalia and Bereiter (2006) have shown that students who engaged in collaborative feedback improved their overall communication skills, as well as gaining a deeper understanding and longer term retention of the material. Although there are many studies in the academic literature that would suggest positive effects associated with peer-assessment (Nelson & Murphy, 1992; Mendonca & Johnson, 1994; Donato, 1994; Ohta, 1995 and 2000; Anton & DiCamilla, 1998; Liu & Hansen, 2002; Suzuki, 2008), there is a lack of empirical evidence for the effects of peer collaboration on long-term retention or learning.(Strijbos et. al., 2010) Many of the studies are qualitative, small scale studies which have greatly contributed to hypothesis generation (Topping, 2010), however the need for further empirical studies is clear.

So what constitutes effective peer-assessment? Van Zundert et. al (2010) have conducted a literature review and concluded that because of the diverse methodology employed for conducting peer assessment, it is hard to draw any overarching conclusions. However, their meta-study narrowed down the following factors: 1) training and experience of peers; 2) students are shown to develop domain-specific skills through peer-assessment based revisions; 3) prior training is having a positive impact on students' thinking styles and academic achievement, and 4) students develop a positive attitude towards carrying out this collaborative task as fostered through training and practice.(Van Zundert et. al., 2010)

A look at the literature revealed different methods employed for training in peer-assessment. Some utilized emulation: a DVD was shown to the students where a group of peers were engaged in peer-assessment.(Middleton et al., 2009; Allen & Mills, 2016) Other studies utilized hands-on practice sessions monitored by the instructor.(Smith et al., 2002) Some investigators introduced the concept of peer-assessment, followed by discussion of interaction strategies, and appraisal criteria formulation for guidance.(van Gennip et al., 2010)

The types of errors that should be targeted by peer-assessment also varied among studies. Truscott (1996, 2007) has argued that correcting grammar errors in the writing workshop is not only ineffective, but also harmful for learners because it detracts from a new and complex task that the student is trying to master, namely process writing. According to Truscott, assessment should be focused on issues of styles, content, and organization in process writing. Other researchers have categorized errors into different levels, such as lexicon, syntax, spelling, and pronunciation.(Ewald, 2015). Diab (2016) has narrowed down the error correction criteria to reducing pronoun agreement and lexical errors. Allen and Mills (2016) created a coding scheme for suggestions for surface errors and text errors.

Researchers have also argued about the most effective way for providing corrections: should they be explicit and direct, or indirect?(Maftoon et al., 2011) While students prefer direct corrections because they are faster to incorporate and lead to more accurate revisions, students actually learned more from indirect corrections (their errors were underlined, but not explained).(Chandler, 2003)

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The challenge of measuring learning as a result of peer-assessment is that a lot of the studies in the literature were conducted on a short-term basis, either a semester of 15 classes or one academic year. So the question remains whether the gains that students make as a result of collaborative feedback are short-lived or whether they are incorporated into their knowledge base for the long term.

Research Question

1) Can students who have received training in peer-assessment during the previous academic year (and have two semesters' worth of experience with collaborative feedback for writing) effectively apply their skills and knowledge in a more advanced writing course?

Methods

The following intervention was designed to study the effectiveness of training in peer-assessment for the duration of three academic semesters. The researcher is the instructor for an advanced level English reading and writing course aimed at second year undergraduate students in the Foreign Studies Department at a Japanese university. A large proportion of the students who have successfully passed this course will enroll into an academic writing workshop in the following year, which is also taught by the researcher. This arrangement offers the unique opportunity to observe if the effects of training in peer-assessment are short-term or have longer term impact on learning.

In their second year reading and writing course, students were introduced to the basics of process writing and completed four writing assignments with two drafts for each, for a total of twelve writing assignments for one academic year. The students were introduced to the concept of peer-assessment and received training for the first three sessions of the course. The training consisted of correcting texts with errors inserted by the instructor in groups of two or three peers. A coding scheme was created for errors and students were shown how to apply it to texts. Throughout the semester the researcher monitored the students to make sure that the coding scheme was used correctly and that the students revised the errors.

The coding scheme included grammar errors (e.g. singular vs. plural, subject-verb agreement, verb tense), mechanics (text formatting, capitalization, spelling), register related changes (change but to however, use of academic vocabulary, etc.), and stylistic errors (correct Topic Sentences, logical progression of ideas in supporting sentences, etc.).

Upon successful completion of this course and following a two month vacation, 12 students (from a second year group of 15) enrolled into the third year academic writing workshop. These 10 students were observed for one semester (15 classes) of the academic writing workshop to see if they still applied the training they had received in the previous year. Peer-assessment training was not provided for this course. Rather, as these students were already familiar with the interaction, they were told to choose two other partners and to work together in the same groups throughout the semester.

Students had to complete 3 writing assignments with 2 drafts for each, for a total of 9 assignments. The students were made aware that they will be scored not only for their final product, but also on the feedback provided to their peers. An assessment form was created by the researcher which differed from the previous year's course in that there were no coded errors. Students had to identify the errors in their peers' writing and to explain the type of error (grammar, mechanics, register or style). The form was open ended and left error correction and revisions completely up to the students. The teacher would only provide corrections and feedback on the final product. The students' comments and successfully incorporated revisions in the third year course were compared with their work from the previous year, to verify if the training received in the previous year had any long-term effects on learning in the following academic year.

Results

Students made significantly more revisions related to mechanics and to register, as well as stylistic errors compared to the previous academic year. (See Table 1) Grammar revisions seem to be less significant, however there seems to be a slight improvement from the previous academic year. Students have made a marked improvement in mastering register related revisions in both years: in other

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words, they were able to improve their academic vocabulary and apply it to their writing.

Students have also made significant progress in successfully incorporating revisions from their peers in the current academic year. (See Table 2) Comparing their first and final essays, the percentage of successful self-corrections guided by peer-assessment increased from 52% to 69%, thus leading to a significant difference for the current academic year. In the previous academic year, the students did not make such a marked progress (the three essays used for this comparison are from the 2nd semester of the previous year): only a 5% increase in successful revisions from the first to the final essay.

Table 1. Types of revisions.

Types of revisions	Current academic year				Previous academic year			
Grammar Errors	M=4.33	SD=3.14	t=.67	p=.07	M=3.27	SD=2.41	t=2.48	p=.62
Mechanics	M=6.58	SD=5.26	t=-1.55	p=.05*	M=3.29	SD=2.48	t=2.11	p=.55
Register related changes	M=7.89	SD=4.52	t=-3.11	p=.02**	M=5.25	SD=3.89	t=-.38	p=.05*
Stylistic errors	M=8.96	SD=6.01	t=-3.15	p=.02**	M=6.25	SD=4.19	t=1.02	p=.06

Table 2. Types of successfully incorporated revisions.

	Current academic year(N =12)				Previous academic year(N =12)			
	M	SD	t	p	M	SD	t	p
Essay 1								
First draft	.52	.03	-3.80	.06	.45	.02	3.24	.06
Final draft	.53	.03	.45	.05*	.43	.03	3.23	.07
Essay 2								
First draft	.55	.04	-7.68	.02**	.47	.03	-3.25	.06
Final draft	.62	.03	.48	.04*	.46	.02	-3.12	.07
Essay 3								
First draft	.62	.03	-12.02	.01**	.50	.03	-3.26	.06
Final draft	.69	.05	.47	.04*	.52	.05	3.45	.05*

Discussion

The results of this study seem to indicate that students not only retain knowledge gained from peer-assessment training in the long run, but also that they are able to significantly improve their academic performance in process writing with continued practice. Interestingly enough students seemed to be less focused on grammar errors in both academic years, which is surprising since other studies have shown that these are the easiest errors to correct and revise for the students. (Maftoon et al., 2011) This is perhaps an artifact of the previous year's feedback from the teacher, which tended to focus more on register, mechanics, and stylistic revisions. It could also be due to the fact that students were more focused on improving their writing skills, thereby ignoring grammatical mistakes in the process. This finding would appear to support Truscott's (1996, 2007) views that focusing on grammar corrections in the process writing class is ineffective.

It is important to note that in the previous academic year the writing assignments were interspersed farther apart throughout the semester and were much shorter in scope, since the previous year's course was also focused on reading, not only writing. Sometimes the essays were follow-up activities to the reading assignments, although they were expanded upon to introduce the students to the basics of process writing. This might explain why there was less improvement in the previous academic year, even in the 2nd semester. The researcher also gave a lot of comments for the peer revisions, so perhaps the students had to manage two daunting tasks in the previous year, learning how to engage in collaborative feedback and learning how to write, which could explain the minor improvement in the successful incorporation of revisions, even in the second semester.

The results of this study support van Zundert et al.'s (2010) conclusions: training and experience helped students to identify and successfully revise errors in their essays with minimal input from their instructor. Their familiarity with peer-assessment meant that they were more positive about engaging with the task than other class members who had not had any previous experience with this technique. While the 12 students who participated in this study were forming groups and engaging in collaborative feedback, the other 5 class members who

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were new to process writing, had to be coached by the instructor how to work in pairs and assist each other. By observing the interactions of this latter group, it appeared that these students were more reluctant to engage with their peers and preferred having the instructor check their essays, rather than receiving input from their peers. To make this kind of study more rigorous, a control group is needed where students have also studied process writing for a year without training or experience in peer-assessment, then compare the two groups: both have experience with process writing, but one group also has training and experience with peer-assessment. Unfortunately this is rather difficult to organize due to constantly changing course schedules and issues of coordination with other faculty members who have their own priorities for their curricula.

The current year academic writing workshop was created to build upon the concepts introduced in the previous academic year. For example students were familiar with Topic Sentences from the previous course, but this year they learned how to add controlling ideas to the main subject. Although the students did not receive further training in peer-assessment for the current year, most of them had kept and were using the coding scheme introduced in the previous year, and those who had lost it were able to make copies from their classmates. It is doubtful whether most undergraduate students would be as diligent as this particular group: these students were from the advanced tier of learners at this university and had plans to become teachers of English, or to continue their studies abroad. Therefore it is not likely that the outcome of this study can be used to make generalizations or have implications for the broader population of students. The small population used in this study is also another limitation in that sense.

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Abstract

A group of second year students ($n=12$) at a Japanese university were introduced to the basics of process writing in English and received training in peer-assessment in a L2 Reading & Writing course. For the duration of one academic year these students engaged in collaborative feedback with constant monitoring from their instructor in order to improve their writing skills. In the following academic year the same group of students was assessed in an advanced L2 Academic Writing Workshop to see whether the effects of the peer-assessment training were long-term and whether learning had indeed occurred as a result of the previous year's intervention.