Investigating the Effect of Peer-Assessment on Students’ Writing Proficiency

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Abstract

Effective teaching is the collaborative effort of both teachers and students. Teachers are expected to engage their students in teaching and learning process so as to make them active in the classroom. Thus, using peer assessment gives opportunity to a teacher to engage students in learning so that they take responsibility for their own learning. Accordingly, the main aim of this study was to investigate the effect of peer-assessment on students’ writing proficiency. In order to achieve this objective, the research question related to whether the use of peer-assessment can bring a change on the students’ writing proficiency was set. The study was quasi-experiment in design. It focused on 1st year Banking and Finance students of Jimma University. Two groups were randomly selected from the four groups and were again randomly assigned as treatment group and control group. Each group contained 30 students. In order to collect data from the students, paragraph writing test was used at the end of the intervention. The data collected were quantitative, and they were analyzed using inferential statistics called independent sample T-test. The result of the analysis showed that the students in the treatment group improved their writing proficiency than the students in control group. This indicates that the use of peer-assessment as intervention showed a significant effect on the students’ writing proficiency \( t (58) = 3.537, p = 0.001, "Sig. (2-tailed)" \). Therefore, it is possible to recommend that the use of peer-assessment in addition to teacher assessment is better than using teacher assessment alone so as to improve writing skills.

Keywords: Peer-Assessment; Writing Proficiency

1. Introduction

1.1. Background of the study

Assessment is considered as a part of learning and teaching process, and it is a tool which assists the learner and the educator in ascertaining the learner's progress in school (Wikstrom, 2007). It helps in the development of the learner by identifying learning problems and monitoring progress. Moreover, it is the means of obtaining information which enables educators and learners to make professional judgments about the learner's academic progress. Effective teaching and learning can only take place if the learner, educator and content are constantly assessed (Zakhe Frans Nxumalo, 2007). Authors such as Black and William (1998), Broadfoot (1996) and Gipps (2001) agree that assessment should not be external and
formal in its implementation but integral to the teaching learning process. Therefore, planning for assessment should be going on simultaneously as planning for learning.

In the traditional model of teaching and learning, assessment is used to check whether the information has been received and absorbed (Gipps, 2001). It takes place after the learning has been completed and provides information and feedback that sums up the teaching and learning process (Hanna & Dettmer, 2004). Traditional testing methods do not thus fit goals like lifelong learning, reflective thinking, critical thinking and problem solving (Dochy & Moerkerke, 1997). This kind of assessment is not effective enough because it contributes less to improve students’ learning. Since it takes place at the end of the course or the program, no more formal learning takes place at this stage, and feedback is given only to sum up the teaching and learning process. Hence, educationists, during the early nineties, voiced their disapproval of the traditional methods of assessment and, in effect, demanded a change (Hancock, 1994).

Accordingly, continuous assessment was introduced to address this demand and is considered by psychologists and educators as a new trend that takes into consideration a learner's skills, attitudes, knowledge and values (Zakhe Frans Nxumalo, 2007). Thus, assessment is now being defined and seen as an integral part of the teaching and learning process, rather than being an event that serves for describing students' achievement at the end of the course (Sheppard, 2000). This new continuous assessment system that readdresses the shortcomings of the summative assessment should lead to a transformation of the pupil from a passive learner to an active and effective learner and producer (Quansah, 1997). Spady (1994) regards continuous assessment as authentic that it gathers information directly pertinent to the quality of performance that perfectly embodies all the defined aspects of that performance. Moreover, Torrance (1995) maintains that authentic strategies for assessment would consider a learner's memory, skills, attitudes, knowledge and values.

However, the assessment method in which the teacher alone dominates learning outcomes by assessing, giving feedback and deciding the success and failure of the students, is still not perfect in improving students’ learning. Thus, it does not fit into the paradigm shift from teacher-centered to student-centered approach (O’Neil & McMahon, 2005). As a result, peer-assessment which gives a central position to the students have received much attention as one of the alternative assessments (Birenbaum & Dochy, 1996). The skill of peer-assessment is important in the development of autonomous, responsible and reflective individuals (Sambell & McDowell, 1998). Most students found the experience of reading a peer’s work helpful and enjoyable, and this makes students become more confident and autonomous in writing (Cowan 2004).

Peer-feedback is a common activity in composition classroom, and it improves students’ writing skill (Brammer & Rees, 2007). It can be beneficial for both the writer and the reviewer (Lundstrom & Baker, 2009). It involves students in revising and editing of their own texts so that it becomes part of the writing process for both students and teachers, and this avoids teachers’ dominance of the correction procedure (Ferris, 2003). This is because feedback given to what students write is an indispensable tool to the improvement of the students’ writing skills (Cohen and Cavalcanti, 1990; Kroll, 1990; Ferris, 2003). Peer-feedback can be used very effectively in the development of students’ writing skills, and this mode of interaction appears to be more productive for the improvement of the writing quality (Spiller, 2012). Peer-assessment of students’ writing presents the students with an authentic task, and this helps them learn from assessing and commenting on the writings of peers (Topping, 1998; Ten Berge et al., 2004). Thus, it is vital to see if the use of peer-assessment in combination with teacher assessment can improve students’ writing proficiency in an Ethiopian university context. Therefore, this study tried to investigate the effect of peer-assessment on banking and finance students' writing proficiency.

1.2 Statement of the problem
Writing in a foreign language, which is the focus of this study, is a complex process involving the ability to communicate in the language and the ability to construct a text in order to express one's ideas effectively in writing (Plata, 1995). As a productive skill, it requires the writer to use a language in order to convey a message. This is because effective communication through writing can only take place when the writer conveys clear message to the reader. The effectiveness of our communication through writing can be judged when the message received is understood and the purpose is fulfilled (Rosenbaum, 2005). Since what we write is for the reader, use of clear language is essential in the writing. Well-structured paragraphs and clear topic sentences enable a reader to follow a line of thinking without difficulty. Language should be concise, formal, and express precisely what the writer wants it to mean. Avoiding vague expressions that are not specific and precise enough for the reader to derive exact meaning is very important to have effective communication through writing (Langan, 2010).

It is obvious that the absence of quality in writing affects the intended communication from taking place. Poor organizations, misuse of punctuation, use of faulty sentences, and inappropriate use of transitional words are some of the factors that can affect the quality of a given writing and contribute to ineffectiveness of communication. Organization at both the sentence and the text level is important for effective communication of meaning, and ultimately, for the quality of the written product (Scardamalia & Bereiter, 1987). Unlike fiction or journalistic writing, the overall structure of academic writing is formal and logical. It must be cohesive and possess a logical flow of ideas, which means that the various parts are connected to form a unified whole. There should be links between sentences and paragraphs so the reader is able to follow the argument (Langan, 2010). This is because writing is all about communicating ideas (Steve, 2002).

Teaching writing means guiding students toward achieving their highest potential in communicating in words (Knudson, Ruth, 1992).

In Ethiopia, the quality of English language teaching in general and teaching writing skill in particular is undeniably deteriorating. Studies conducted on English writing proficiency of Ethiopian students showed that most students have poor writing proficiency. Alamirew (2005) in his study found out that students have average performance in writing. The researcher of this study from his teaching experience also identified that most students are less proficient in English writing. In order to alleviate this problem and to promote the quality relevance not only educational materials and facilities are important, but also due attention should be given to utilization of appropriate educational methodologies (FDRGE, 1994). Thus, applying peer-assessment which has been more commonly incorporated into English language writing instruction in writing class is appropriate (Cheng & Warren, 2005).

According to Hillocks (1987) and Knudson (1992), the quality of student writing does not improve through the traditional assessment which does not include students in the process of assessment. Even though teacher feedback is often regarded as a key condition for the improvement of students’ writing skills, peer feedback has often been valued as it helps learners be more in control of their learning, and more effective in writing (Tsui et al, 2000 & Hansson, 2014). It is advantageous in English as a Foreign Language (EFL) writing classroom, and it shares responsibility for the management of learning and learner-centered teaching (Birjandi & Hadidi Tamjid, 2012).

Peer-assessment of writing helps students learn from one another, and learning from one another reinforces active learning in which students take responsibility for their own learning (Johnson-Bogart’s, 2000). Since peer-assessment is often considered as a tool to improve writing ability, it can help teacher assessment, and together, they help students develop the ability to make judgments, which is a necessary skill for learning writing (Graham & Rachel, 1995). This study, therefore, intended to investigate the effect of peer-assessment on students’ writing proficiency in Ethiopian context. Thus, it attempted to answer the following research question.

- Is there a significant difference between students in the experimental group who received feedback from both their teacher and their peers and students in the control group who received feedback from their teacher alone in terms of writing proficiency?
1.3 The research hypotheses

**H0:** There is no significant difference between students in the experimental group who received feedback from both their teacher and their peers and students in the control group who received feedback from their teacher alone in terms of writing proficiency

**H1:** There is a significant difference between students in the experimental group who received feedback from both their teacher and their peers and students in the control group who received feedbacks from their teacher alone in terms of writing proficiency

2. Materials and Methods

2.1 Study setting

This study focused on first year Banking and Finance Department students of Jimma University. Jimma University was purposely selected for the study based on proximity for the researcher as he was supposed to teach and continuously follow up the progress of the treatment group. There are two institutes (Jimma Institute of Technology (JIT) and Institute of Health Science) and six colleges (College of Agriculture and Veterinary Medicine, College of Social Sciences and Humanities, College of Natural sciences, College of Education and Behavioural sciences and College of Business and Economics and College of Law and Governance) in the university. Among these colleges, the College of Business and Economics was randomly selected to be the focus of this study. The college has five departments; namely, Accounting and Finance Department, Economics Department, Management Department and Banking and Finance Department and Hotel and Tourism Management Department. Of the five Departments, Banking and Finance Department was also randomly selected for the study.

2.2 Design of the study

This study, as mentioned above, tried to investigate the effect of peer-assessment on students’ writing proficiency. As can be understood from the title, the study focused on quantitative aspects, and it employed quasi-experimental design to see the effect of involving students in assessment process on their writing proficiency. Quasi-experiment is a form of experimental research in which individuals are not randomly assigned to groups, so we have to study and implement a program in a natural school setting by using intact groups (Cresswell, 2014). The participants of this study were not randomly assigned in to groups. This means the groups were intact or natural. Quantitative data, therefore, were collected from these two intact groups. Thus, the selection of quasi-experimental as a design for this was appropriate.

2.3 Population, sample and sampling technique

As indicated above, the target population of this study were first year Banking and Finance Department students of Jimma University. The department had four groups (groups, A, B, C & D) of which two groups were selected using random sampling technique. Accordingly, section A (N=30 students) & section B (N=30 students) were selected and included in the study, and section A was assigned as comparison group whereas section B was assigned as treatment group. Since the course Basic Writing Skill is always offered for first year students, the researcher used purposive sampling technique to select first year students of the department.
The students in the two groups have similar educational background. They learned under the same educational policy by the same curriculum, and they all learned English as a subject starting from grade one. They also took similar national examinations (both at grade 10 and grade 12). The information obtained from the college of Business and Economics shows that newly entry students of the college are always assigned to the five departments of the college based on their entrance exam results. The same is true for the students in Banking and Finance Department of the college who underwent the process of the study. This shows that they are more or less similar in their entrance exam results. Thus, it is possible to say that the students were comparable.

2.4 Data collection instrument

The data for this study were gathered through paragraph writing test (pre-test and post-test). That is, in order to answer the research question and to test the respective alternative hypothesis, the researcher used paragraph writing tests both as pre-test and post-test. At each stage, the students wrote two types of paragraph namely argumentative paragraph and narrative paragraph. Two titles namely, “Allowing abortion” and “A happy moment in my life” were selected for argumentative and narrative writing respectively. At pre-test stage, the students in both the treatment and control groups wrote two paragraphs on the titles. This helped the researcher to see the status of the students in both groups in writing proficiency. After giving the intervention for the students in the treatment group for eight weeks or two months (involving students in the treatment group in peer assessments), again the students in both the treatment and comparison groups were asked to write two paragraphs on the two topics as a post-test to see if the intervention (the use of peer-assessment) helped the students in the treatment group to improve their writing proficiency.

According to the National Capital Language Resource Center (2003), there are two main methods of scoring writing (paragraph or essay) namely holistic and analytic scales. In a typical holistic scoring, each script is read quickly and then judged against a rating scale, or scoring rubric, that outlines the scoring criteria whereas in analytic scoring, scripts are rated on several aspects of writing or criteria rather than given a single score (Weigle, 2002). For this study, therefore, the researcher decided to use analytic scoring method for the reason that it has the following advantages over the holistic method. 1) It provides valuable diagnostic information (strengths and weaknesses) about a student’s writing ability, for it focuses on a number of dimensions of the writing performance; 2) It assumes that a student may have uneven development of skills in different aspects of writing (i.e. organization, crafting sentences, developing ideas and etc.), and thus it seems more appropriate to be used for L2 writers, whose relevant writing skills develop at different rates; 3) It is more reliable because of its several evaluation items that may yield data to make reasonable inferences about the writing ability of a student; 4) The analytic scoring scheme is easier for students to understand and apply the criteria for assessing written work and 5) The analytic scoring rubric is more appropriate than holistic scoring rubric to delineate different aspects of writing performance.

Since the focus is to assess writing proficiency in English, features must be carefully chosen in order to give an accurate picture of what we are searching for (Villanueva, 2008). Thus, the researcher decided to use eight analytical features or aspects to assess or evaluate students writing (paragraph). The features included: sentence errors, content, organization or structure (introduction, body and conclusion), unity, coherence, grammar, mechanics and vocabulary. The researcher also used checklist that included the above rubrics to rate the problems in the paragraph, and he also used two additional raters to achieve inter-rater reliability.

The two raters were selected from the teachers who specialized in teaching English as a Foreign Language (TEFL). The selection was done based on willingness. After they were selected, they were given training on how to assess the paragraphs. The training was given for half a day (2-4 hours in the morning), and it focused on the issues like assessment in general and assessing writing in particular. The
training more specifically focused on the issue of analytic assessment and the difference it has from holistic assessment and the way how to rate the paragraphs using the rubrics on the checklist.

After the two raters rated the paragraphs, inter rater or inter scorer reliability was checked by computing Pearson correlation coefficient. Accordingly, the result was found to be significant at \( r (60) = 0.949, p= 0.001 \). This implies that there was high correlation between rater 1 and rater 2.

2.5 Method of data analysis

To address the research question stated earlier, quantitative data were collected through paragraph writing test, and the data were entered into Statistical Package for the Social Sciences (SPSS) version 24.0 for analysis. Accordingly, the inferential statistics called independent sample T-test was used to analyze the data. Independent sample T-test was applied to compare the mean difference between the two groups (the control and experimental groups) on writing proficiency. Thus, the significance level was reported in terms of 0.05 which is the normal alpha value or cut-off point.

2.6 Ethical considerations

Research ethics has been defined as ‘a matter of principled sensitivity to the rights of others, and that ‘while truth is good, respect for human dignity is better’ (Cavan, 1977). Thus, participants should know that their involvement is voluntary at all times, and they should receive a thorough explanation beforehand of the benefits, rights, risks, and dangers involved as a consequence of their participation in the research project (Cohen, et al., 2005). This gives the individuals the right to decide either to participate or to refuse in the research, so informed consent which is the procedure in which the individuals choose whether to participate in an investigation after being informed of facts that would be likely to influence their decisions is an important aspect of research ethics (Diener & Crandall, 1978 & Jones, 1994).

Accordingly, the procedures explained below indicate the attempt that was made to maintain the ethics of this research. Before beginning data collection, the researcher first explained the purpose of the study for the study participants and thanked them in advance for giving their valuable time in filling the questionnaires. Moreover, in order to make the participants free from the psychological impact of the questionnaire, they were informed not to write their names on the paper, and they were also told that the data that were collected from them were only for research purpose. Thus, the researcher asked the participants to sign on data collecting papers to show their agreement, and he started collecting after getting consent from them. Generally, in these ways, care was taken to address ethical issues.

3. Results

3.1 T-test result of writing proficiency

After intervention was over, as said above, the data for writing proficiency were collected through paragraph writing test. The students in both groups wrote two paragraphs namely argumentative paragraph and narrative paragraph. After having the two paragraphs of each student rated by the raters (the detail about this is stated under section 2.4), the researcher added the results together and computed the mean, and he analyzed these mean results using T-test on SPSS. Accordingly, independent sample T-test results and its descriptive analysis output are indicated below.

<table>
<thead>
<tr>
<th>Group Statistics</th>
</tr>
</thead>
</table>

Table 1: Descriptive statistics results of writing proficiency
As can be seen from the table (table 1), equal number of students in both groups (treatment group (30 students) and control group (30 students)) were compared together on paragraph writing test. However, we see differences between the two groups in mean results. Accordingly, the mean result (3.9412) of the experimental group is found to be greater than the mean result of the control group which is 2.8303. This implies that the difference has been observed between the two groups as a result of the intervention.

<table>
<thead>
<tr>
<th>Writing proficiency</th>
<th>experimental</th>
<th>control</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Mean</td>
<td>3.9412</td>
<td>2.8303</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.11090</td>
<td>1.31360</td>
</tr>
<tr>
<td>Std. Error Mean</td>
<td>.20282</td>
<td>.23983</td>
</tr>
</tbody>
</table>

As can be seen from the able table 2, independent sample t-test result showed that there is a significant difference between the experimental group and the control group as the result of the intervention (peer-assessment). The result is reported as t (58) = 3.537, p = .001, 2-tailed. P value in the table which is less than 0.05 (p<0.05) proved the existence of a significance difference between the two groups. This indicates that alternative hypothesis (H1) that states as “There is a significant difference between experimental group and control group in terms of writing proficiency as a result of using peer-assessment.” should be accepted whereas the null hypothesis (H0) which states as “There is no significant difference between experimental group and control group in terms of writing proficiency as a result of using peer-assessment.” should be rejected.

4. Discussion of the results

The main purpose of this study, as indicated above, was to investigate the effect of peer-assessment on students’ writing proficiency. This part, therefore, deals with the explanation of the results of the study in response to the research question. It discusses the research question stated as “Is there a significant difference between experimental group and control group in terms of writing proficiency as a
result of using peer-assessment?" The discussion was supported with the results of the researches conducted so far on the same issue.

- **Is there a significant difference between experimental group and control group in terms of writing proficiency as a result of using peer-assessment?**

  Writing in a foreign language is a complex process involving the ability to communicate in the language and the ability to construct a text in order to express one's ideas effectively in writing (Plata, 1995). As productive skill, it requires the writer to use clear language in order to convey a message. This is because effective communication through writing can only take place when the writer conveys clear message to the reader. The purpose of teaching writing, therefore, is to guide students toward achieving their highest potential in communicating in words, in order to help the students perceive themselves as being capable of functioning independently (Knudson, Ruth, 1992). According to Hillocks (1987) and Knudson (1992), the quality of student writing does not improve through the traditional assessment which does not include students in the process of assessment. Therefore, Peer-assessment, along with teacher assessment, was used as an intervention to see if it improves students’ writing proficiency. After the intervention, the post test result of both groups (treatment group and control group) were compared, and the result showed that the students in the treatment group out performed in writing than the students in the control group as a result of the treatment given. The result of the t-test report (t (58) = 3.537, p = 0.001, 2-tailed.) shows that there is a significant difference between experimental group and control group in terms of writing proficiency as a result of using peer-assessment, and this positively answered the research question stated for this purpose. This result is in agreement with the result of the study conducted by Richer (1992) in which the effects of peer feedback of essays were compared with teacher feedback. The study, therefore, showed that students in the peer feedback group indicated greater gains in writing proficiency (p = 0.009). Moreover, in their research on writing improvements among university students in a research methods class, Cho and Schunn (2007) noted more writing improvement among the students who received feedback on their writing drafts only from their peers compared to another group of students who received feedback on their writing drafts only from their instructor. Topping K., (1998) supports that peer-assessment appears capable of yielding outcomes better than that of teacher assessment. Besides, peer feedback, according to the authors like Brammer & Rees, (2007); Tsui et al, (2000) & Hansson, (2014) is a common activity in composition classroom, and it improves students’ writing skill.

**Conclusion**

Data were collected through paragraph writing as post-test from the students in the two groups (treatment group and control group) on their writing proficiency. The results of the two groups were compared, and the mean of the students in the treatment group (3.9412) was found to be greater than the mean result of the students in the control group (2.8303). The t-test result was also proved to be significant, and it can be reported as t (58) = 3.537, p = 0.001, "Sig. (2-tailed)". From this, it is possible to conclude that the intervention (peer assessment) helped the students in the treatment group improve their writing proficiency than the students in the control group. As a result, the null hypothesis (H0) which was stated as “There is no significant difference between students in the experimental group who received feedback from both their teacher and their peers and students in the control group who received feedback from their teacher alone in terms of writing proficiency” is rejected, and alternative hypothesis (H1) which was stated as “There is a significant difference between students in the experimental group who received feedback from both their teacher and their peers and students in the control group who received feedback from their teacher alone in terms of writing proficiency” is accepted.
Declarations

Author contribution statement

Guta Legese: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Tekle Ferede: Played the roles of principal advisorship and supported in providing with necessary materials.

Andinet Shimelis: Played the roles of co-advisorship

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Competing interest statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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