

Investigating the Effect of Peer-Assessment on Students' Writing Strategy Use

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Abstract

The main Purpose of this study was to investigate the effect of peer-assessment on students' writing strategy use. Qualitative supplement quantitative method was used for the study. It focused on 1st year Banking and Finance Department students of Jimma University. The department had four groups (A, B, C & D) of which two groups were selected by using random sampling technique. Accordingly, section A and B were selected and included in the study. Section A was assigned as comparison group whereas section B was assigned as treatment group. Closed-ended questionnaire was used at the end of the intervention to collect the quantitative data from the students. Moreover, qualitative data were collected from the students using journal writing. The purpose of collecting qualitative data was to assess the perception of students on the use of peer-assessment. The quantitative data were analysed using independent sample T-test. The result of the analysis showed that the students in the treatment group improved their writing strategy use than the students in control group. This indicates that the use of peer-assessment as intervention showed a significant effect on the students' writing strategy use ($t(58) = 2.856, p = 0.006$). Besides, Qualitative content analysis was used to analyse the qualitative data. The result of the qualitative data was in agreement with the results of the quantitative analysis. It showed that the students well perceived the use of peer-assessment in writing classroom. Therefore, it is recommended that the use of peer-assessment in addition to teacher assessment is better than using teacher assessment alone to improve writing.

Keywords: Peer-assessment, writing strategy use

Introduction

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 (Wikstorm, 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, 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 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 19th century,

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, 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 has 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). Integrating peer-assessment with teacher assessment is very important because it is an aspect of student-centered assessment. Peer-assessment develops important cognitive skills such as critical

thinking, teamwork (social strategy), decision-making, self-monitoring and regulation and problem solving (meta-cognitive strategy) (Sluijsmans, Dochy & Moerkerke, 1998).

Peer assessment is one of the assessment methods that are widely applied for formative purpose (Gravett & Geyser, 2004). Students can be involved in the teaching learning process by means of peer-assessment, and the use of this assessment method makes the process much more learning because learners are able to share with one another the experiences they have undertaken (Brown & Knight, 1994; Coombe et al., 2007). This sharing can involve students in exchange of learning strategies including writing strategies. Encouraging students to assess each other's contributions to discussion and discourse is further exposing them to the skills of critical reflection and analysis which require application of effective learning strategies (Birenbaum, 1996; Sambell & McDowell, 1998). Thus, it is vital to see if the use of peer-assessment in combination with teacher assessment can improve students' writing strategy use in an Ethiopian university context. Therefore, this study tried to investigate the effect of peer-assessment on banking and finance students' writing strategy use.

Statement of the problem

Peer-assessment has been more commonly incorporated into English language writing instruction (Cheng & Warren, 2005). 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, 2012). Peer-assessment of writing helps students learn from each other, and learning from one another reinforces active 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 (Graham & Rachel, 1995). Peer-assessment in writing is a socially situated activity, involving issues of building a better social identity and social

relations (Lillis, 2001). Moreover, peer collaboration also develops students' overall writing strategies (Crinon & Marin, 2010).

Learning to write has been described as complex, and difficult task, and as a result of this many students struggle with writing challenges (Hayes, 2006; McCutchen, 2006). In order to overcome the challenges of writing, the students should have knowledge about the writing process, develop the lower-level skills and the higher level cognitive processes and use strategies believed to underlie effective writing (Graham & Harris, 2002; Graham, et al., 2000; Saddler and Graham, 2007). This is because effective writing is a flexible, goal-directed activity supported by a rich knowledge of cognitive processes and strategies for planning, text production, and revision. Students, who explicitly know about their own learning process and what makes it effective, learn more (Oxford, 1990). According to Flower and Hayes (1980) and Harris et al. (1998), effective writers engage in purposeful and active self-monitoring and self-direction of writing processes and strategies. The number and range of strategies used by students can make deference between them as more and less proficient writers. This implies that the role of writing strategies in the process of writing has become increasingly important (Chien, 2010; Ridhuan& Abdullah, 2009).

Peer-assessment, which is the focus of this study, can help students to develop and use verities of writing strategies. This is because peer interaction is considered as one type of supporting students in their writing process (Hyland, 2003), and it leads to an enhancement of students' overall development of their writing strategies (Crinon and Marin, 2010). This shows that active and collaborative learning enhances students' motivation, sense of ownership, and understanding of how effort improves writing performance.

Writers such as Chamot, Anna et al. (1987) and Oxford (1990), who wrote on strategy, mainly focused on learning strategy in general. However, these learning strategies also work for learning writing as well. The question here lays on whether the students are familiar with

the strategies and using them in learning writing. Since writing is a complex and challenging activity for many students (Chin, 2000), it needs dedication and the use of different strategies like cognitive strategies, meta-cognitive strategies, social strategies, affective strategies and memory strategies. This is because language learning in general and learning writing in particular require students to apply such learning strategies deliberately in order to facilitate their learning (Chamot, 1987; Sluijsmans et al., 2002). Moreover, according to Ridhuan and Abdullah (2009), the key to producing good writing relies on the type and amount of strategies used. Nevertheless, in most writing classes, the researcher observed that his students do not use writing strategies like, planning, drafting and revising their writing. They simply rush to the final writing at once. The use of peer-assessment helps students use writing strategies (Crinon & Marin, 2010), and the use of writing strategy may ultimately help maximize the development of foreign language writing (Myunghwan, 2017). The intention of this study, therefore, was to identify if the use of peer-assessment improve the students' writing strategy use.

With regard to the use of this alternative assessment (peer-assessment), several studies have been conducted, and almost all of them have come up with similar findings. An Overview of Peer-Assessment (Amirreza & Amir, 2015); Peer and Teacher Assessment in EFL Writing Compositions (Zeineb, 2017) and peer assessment in an EFL context: attitudes and friendship bias (Azarnoosh, 2013). All of the studies have focused on variables like practice of peer-assessment and attitude and perception of the students on the use of peer-assessment. None of them focused on the effect of peer-assessment on students' writing strategy use. This study, therefore, is different from them in that it attempted to investigate the effect of peer-assessment on students' writing strategy use. Thus, it intended to answer the following research questions.

- 1) 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 strategy use?

- 2) How do the students in the treatment group perceive the importance of using peer-assessment?

Materials and Methods

Study setting

This study focused on first year Banking and Finance Department students at 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.

Design of the study

The study, however, mainly focused on quantitative aspects, and it employed quasi-experimental design to see the effect of involving students in assessment process on their writing strategy use. Quasi-experiment is a form of experimental research in which individuals are not randomly assigned in 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 is appropriate.

Population, sample and sampling technique

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 techniques. 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. The researcher focused on first year students of the department because the course Basic Writing Skill, which was the focus of this study, is always offered for first year students.

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 lower classes. 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.

Instruments of data collection

Questionnaire

In order to answer the research question that was stated as "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 strategy use?" and address its respective hypothesis 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 strategy use", closed ended questionnaire was used to collect quantitative data. The Strategy Inventory for Language Learning (SILL) created by Oxford in (1990) was used as the underlying principle for the selection of the questionnaire. The Strategy Inventory was developed for Language Learning, and it is categorized in to six strategies, cognitive strategies, metacognitive strategies, social strategies, affective strategies, compensation strategies and memory strategies. On the bases of these learning strategies, the authors such as Deepti and Getachew (2011) and Razi (2012) developed their own questionnaires for writing strategies which contained 38 and 32 items, and the reliabilities of the items were proved to be 0.88 and 0.987 respectively. The questionnaire for this study, therefore, was adapted from the authors' articles with some modifications only. Accordingly, the questionnaire that consisted of 52 items was used to collect data to see if there was an improvement in students' writing strategy use as a result of using peer-assessment. Even though the items are categorized under each writing strategy, they were mixed up into one questionnaire in order to prevent students from guessing.

The items were prepared based on five-point Likert scale. The five-point scales were arranged as never or almost never true of me (1), usually not true of me (2), somewhat true of me (3), usually true of me (4) and always or almost always true of me (5) to measure the students writing strategy use. Accordingly, the students were expected to show the level of their writing strategy use by choosing from items following the arrangement. Before using the questionnaire to collect the data for the study, the researcher using the data collected before the intervention computed Cronbach's alpha to check if all of the items were appropriate for the context of this study. Then, he again found that the items were highly

reliable with 0.995 reliability coefficient. The following table shows reliability statistics result of writing strategy items.

Table 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.995	.996	52

Journal writing

Journal, also called a diary, is a notebook where people can write their thoughts, ideas, feelings or experiences. Journal writing is a very effective and natural tool for students since it enables them to reflect on what they have learned, how they have learned it, what kind of difficulties they have, what helps them to overcome these and other difficulties in the process of learning. Moreover, teachers can learn from students' journal about their constraints in writing and help them to remove them. They can also discover what teaching strategies students appreciate most and implement them in their teaching (Klimova, 2015). Besides, according to Race (2002), reflecting feelings through journal writing, deepens learning. This is because the act of reflecting causes students to make sense of what they learned, why they learned it, and how that particular learning took place. Moreover, it is about linking their learning to the wider perspective of learning. Reflection can often give us insights into what may have gone wrong with our learning, and how on a future occasion we might avoid now known pitfalls.

Accordingly, the research question which dealt with the perception of the students in treatment group on the use of peer-assessment required qualitative data which were obtained through journal writing. Thus, at the end of the intervention time, the students in the treatment group were asked to write a journal on their feelings about the treatment that they underwent for eight weeks. It was open-ended (free writing) that enabled each of the students in comparison group to express their ideas on

how they found the treatment (peer-assessment).

Procedure of the experiment

The experiment was carried out for eight weeks. It was carried out in the second semester because the writing course, which was the focus of this study, was offered in the semester. Before it began, the researcher accomplished two things. For one thing, he trained the students in both groups on the issue of assessment in general and peer-assessment in particular. The training mostly focused on how to implement peer-assessment. It more specifically focused on the features (sentence errors, content, organization or structure (introduction, body and conclusion), unity, coherence, grammar, mechanics and vocabulary) that the students should use to assess the works of their peers. The training was carried out for one day: morning (from 8:00 am to 12:00 am) and in the afternoon (from 2:00 pm to 5:00). Next, he formed a fixed group for the students in the treatment group to implement peer-assessment. In doing this, the researcher formed mixed ability group which contained students with high, medium and low ability. This was done based on their first semester results. The 30 students in the class were divided into six groups, each with five students. The group was made fixed for it was assumed to enable the students be familiar with one another and be ready for the next work. Moreover, it was done to save time for the fact that it is wasting time to always make a group.

After the training and group formation works were over, the experiment was begun. For the purpose of the experiment, the students were made to write twelve paragraphs (three argumentative paragraphs, three descriptive paragraphs, three expository paragraphs and three narrative paragraphs on topic given to them for each paragraph. As both paragraph writing and peer-assessment took place in classroom throughout, class time was divided into two. The first one hour was always given for paragraph writing. This included the time for preparation: receiving check list from the teacher, receiving paper on which they write a paragraph from the teacher and thinking about

the new topic. After they finished their paragraph writing, the teacher always collected the paragraphs and randomly redistributed them for peer-assessment. Since the class was a three hours class, the rest two hours were given for peer assessment. In these two hours, the students always accomplished the activities like collecting the paragraph they should assess, finding their group members, rereading the check list, first assessing the paragraph individually, and finally, coming together to assess the paragraphs each one by one in group and discuss their comments based on the criteria on their checklist.

The check list was used to guide the students, and it contained eight features and their descriptions. It helped the students recall the points discussed during the training. Accordingly, they always tried to indicate problems in the paragraphs by shading them with highlighter and after that they gave comments (feedback) on the problems. The check list was always given to the students after they finished writing their paragraph and was always collected after the class. This was done to prevent the students in the control group from using the check list. By writing paragraphs and participating in assessment, the students, therefore, played the role of a writer and assessor. The teacher was always there to help the students in the process of the peer-assessment.

After the intervention, the researcher collected data on the issue of students' writing strategy use by using closed-ended questionnaire. The data were collected from the students in the two groups (both treatment group and control group). Then, the data were analysed using independent sample t-test on Statistical Package for the Social Sciences (SPSS) version 24. Finally, the result of the analyses, as reported in results section, indicated that significant difference was observed between the two groups on writing strategy use as a result of using peer-assessment.

Method of data analysis

There were two types of data namely quantitative data and qualitative data for this study, and this showed that both quantitative

method and qualitative method of data analysis were used to analyse these data. Accordingly, the quantitative data which were obtained through questionnaires for writing strategy use were analysed by using independent sample T-test. Independent sample T-test was applied to compare the mean difference between the two groups (the control and experimental groups) and examine the effect of independent variable on the dependent variable (writing strategy use).

The second research question, which was stated as “How do the students in the treatment group perceive the effect of peer-assessment on their writing strategy use?” on the other hand, was designed to obtain qualitative data from the students in the treatment group about their perception on the use of peer-assessment. Thus, the data were analysed using qualitative method of data analysis. Qualitative data analysis is defined as “a detailed descriptions of situations, events, observed behaviours, direct quotations from people about their experiences, attitudes, beliefs, and thoughts and excerpts or entire passages from documents, correspondence and records” (Patton, 1990, p. 22). Scholars identify six common types of qualitative data analysis as content analysis, narrative analysis, discourse analysis, thematic analysis, framework analysis and grounded theory (Charmaz, 2006; Denzin and Lincoln, 2005; Riessman, 1993; Ritchie and Lewis, 2003; Wodak and Meyer, 2001). Among these types of qualitative data analysis, the researcher of this study employed content analysis to analyse the qualitative data collected through journal writing to answer the research question stated above. Content analysis is chosen because it is the procedure for the categorization of verbal or behavioural data for the purpose of classification, summarization and tabulation. Moreover, content analysis can describe the data and gives interpretations about it (Gottschalk, 1995).

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.

Results

T-test result of writing strategy use

To answer the research question that was stated as “Is there a significant difference between experimental group and control group in terms of writing strategy use as a result of using peer-assessment?”, standardized questionnaire which contained 52 items was administered for the students in both groups after the intervention was completed. The data collected through the questionnaire were analysed using independent sample t-test, and the outputs are stated below.

Table 2: Descriptive statistics results of writing strategy use

Groups		Group Statistics			
		N	Mean	Std. Deviation	Std. Error Mean
Writing strategy use	Experimental	30	3.9590	1.09866	.20059
	Control	30	3.1222	1.16986	.21359

The outputs on this table (Table 2) also show that there were equal numbers of students in the two groups (treatment group (30) and control group (30)). Here also the mean of

experimental group which is 3.9590 is greater than 3.1222 which is the mean of control group. From this, it is possible to understand that a difference is observed between the two groups as a result of the intervention.

Table 3: Independent samples test results of writing strategy use

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Writing strategy use	Equal variances assumed	.233	.631	2.856	58	.006	.83676	.29301	.25024	1.42328
	Equal variances not assumed			2.856	57.773	.006	.83676	.29301	.25019	1.42333

The independent sample t-test result indicated in the above table (Table 3) shows that there is a significant difference between the experimental group and the control group on writing strategy use as the result of the intervention (peer-assessment). The result is statistically significant at $t(58) = 2.856, p = 0.006$. The obtained P value is less than 0.05 ($p < 0.05$), and this indicates that alternative hypothesis (H1) that states as "There is a significant difference between experimental group and control group in terms of writing strategy use 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 strategy use as a result of using peer-assessment." should be rejected.

Analysis of qualitative data

The qualitative data were collected through journal writing from the students in the treatment group alone. The purpose of collecting these data was to answer the research question that was stated as "How do the students in the treatment group perceive the importance of using peer-assessment?" Among the 30 students who underwent the treatment, only 25 students were involved in journal writing about their perception on the effect of using peer-assessment. This data were collected at the end of the semester. The number of the students decreased from 30 to 25 because of absenteeism.

Among the 25 students, who wrote their perception, 10 of them wrote something different from the objective while only 15 of them wrote to the point. Even though they were clearly informed about what they should write, the ten (10) students wrote about the importance of taking the course basic writing skills, about the appreciation they have for their instructor for teaching the course effectively (general) and for not missing the class.

The rest eleven (15) students, on the other hand, tried to express their understanding about the use of peer assessment. They explained that the assessment method developed their writing strategy. The students' journal writing about their perception on the use of peer-assessment indicated that they well perceived it. They directly showed that the intervention (peer-assessment) had a positive impact on the dependent variable (writing strategy use). The assessment method, according to the students, improved their thinking skills (cognitive strategy). Moreover, they said that it gave them the opportunity of doing together (co-operative learning). Some of them indicated that the comments given by their peers on their writing helped them plan and have an outline before starting writing to produce good writing (Meta-cognitive strategy). For example, some statements among others are stated below to support the above claim. The letter "V" is used to represent the word "verbatim".

- V1:** Peer-assessment encourages group work
- V2:** Peer-assessment gave us a chance of learning from each other
- V3:** Now, I think about what I write after I get comment from my peers
- V4:** I learned how to generate ideas for my writing when using peer-assessment
- V5:** The method is good because we exchanged our experience
- V6:** Through peer-assessment, we got a chance of doing together
- V7:** Evaluating our writing with each other have improved our writing
- V8:** I think this learning method is better because it improved our thinking skills
- V9:** We started writing by plan
- V10:** Before we write a paragraph, we prepare outline

The statements indicate that the students in the process of participating in the intervention (peer-assessment) started using some learning strategies which they specifically applied to learning writing. The strategies, as can be understood from the statements are social strategy, cognitive strategy and meta-cognitive strategy. From the statements, it is possible to

understand that the students well perceived peer-assessment. They expressed that they got the above-mentioned benefits. For example, they indicated that they practiced peer-assessment more and more by commenting on the writing performances of their peers, and as a result, they benefited a lot. They reported that the method improved their writing strategy use. Accordingly, they recommended that the method (peer-assessment), along with teacher assessment, should be used for teaching writing. The following verbatim are selected from the students' journal to confirm that recommendations are made by them on the use of peer-assessment.

- V1:** This method should be used continuously for the future because it makes students learn how to write effectively
- V2:** This peer-assessment has to be continued because by using it students discuss with each other and share their ideas
- V3:** It is very useful for students to improve writing skills
- V4:** This method of teaching and learning is very useful for the future generation
- V5:** This method should be used for the future because it is very good way of teaching and learning
- V6:** It is good to use the method because students improve their writing error by using it
- V7:** This peer-assessment is good method of teaching and learning and I recommend it for

The results of the quantitative data is in agreement with the results of the qualitative data, and they together confirm that the peer-assessment supports teacher assessment in improving students' learning. Therefore, we can conclude that using peer-assessment by combining with teacher-based assessment is better than using teacher-based assessment alone.

Discussion of the results

The main purpose of this study, as indicated above, was to investigate the effect of peer-assessment on students' writing strategy use.

Moreover, an assessment of students' perception on the use of peer-assessment was the second objective. This part, therefore, deals with the explanation of the results of the study in response to the research questions. It discusses the quantitative research question stated as "Is there a significant difference between experimental group and control group in terms of writing strategy use as a result of using peer-assessment?" and the qualitative research question stated as "How do the students in the treatment group perceive the importance of using peer-assessment?". The discussions were supported with the results of the researches conducted so far on the same or related issues. Thus, the discussion was given below:

- **Is there a significant difference in writing strategy use between students in the experimental group and that of those in the control group?**

Learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations (Oxford, 1990). Even though this definition is for learning in general, it also includes writing strategy which is the focus of this study. The use of strategies in the writing process is crucial to successful writing. The key to producing good writing depends on the types and amount of strategies used, and on the regulation of the strategies for generating ideas or for revising what has been written (Ridhuan & Abdullah, 2009). This is because the role of writing strategies in the process of writing has become increasingly important (Chien, 2010; Ridhuan & Abdullah, 2009). One of the purposes of this study, therefore, was to investigate the effect of peer-assessment on students' writing strategy use. Peer response according to Hayes (1996) is supposed to be beneficial for learning writing strategies and for becoming aware of once writing process. It is a type of scaffolding in the writing process (Hyland, 2003). In this study, thus, an attempt was made to answer the research question stated as "Is there a significant difference between experimental group and control group in terms of writing strategy use as a result of using peer-assessment?"

Accordingly, the post test result ($t(58) = 2.856$, $p = 0.006$, "Sig. (2-tailed)") showed that there is statistically significant difference between the two groups on the issue. The obtained P value is less than 0.05 ($p < 0.05$). Sluijsmans, Dochy & Moerkerke, (1998) suggested that peer-assessment develops cognitive skills such as critical thinking, teamwork (social strategy), decision-making, self-monitoring and regulation and problem solving (meta-cognitive strategy). Moreover, peer response appears to promote a sense of community, improve students' social skills, and promote class unity (Ferris and Hedgcock 2005; Leki, 1990 and Carson and Nelson 1994). Crinon and Marin (2010) in their study found that peer-assessment leads to an enhancement of students' strategic understanding and an overall development of their writing strategies. This implies that the role of writing strategies in the process of writing has become increasingly important (Chien, 2010; Ridhuan & Abdullah, 2009). From this, it is possible to understand that there is agreement between the results of the current study regarding the effect of peer-assessment on students' writing strategy use with the results of the studies mentioned above.

How do the students in the treatment group perceive the importance of using peer-assessment?

Many researches indicated that peer assessment benefits both the assessor and students who receive the assessment in many ways. To mention some, engaging in a cognitively-demanding activity that extends their understanding of subject matter and writing (Roscoe & Chi, 2007), contributing to the development of critical thinking in students (Hanrahan & Isaacs, 2010; Douchy, et al., 1999), improving written ability of students (Crossman & Kite, 2012; Kim, 2015), constructing new knowledge through collaborative working (Fernandez and Dabao, 2012), helping students produce quality text (Shehadeh, 2011) are among others.

Regardless of its benefits, peer- assessment cannot equally be accepted by all students. Studies showed that there are differences in perceptions among students who underwent

peer-assessment. The purpose of collecting the qualitative data for this study, therefore, was to assess how the students in the treatment group perceive the importance of using peer-assessment in Ethiopian context. The data after being collected through journal writing were analysed qualitatively, and the result showed that the students positively perceived the use of peer-assessment in addition to teacher based assessment. Through their journal, the students indicated that the assessment method (peer-assessment) helped them develop their cognitive strategy, meta-cognitive strategy and social strategy.

Based on the benefits they gained from using peer-assessment, the students recommended the method for use in future in writing classes. This really indicates that they positively perceived the method. In line with this, other studies report a more positive perception about peer-assessment on writing for the students who receive peer review (Katstra et al.1987; Moussaoui, (2012) & Zhu (1994, 1995). For example, Gatfield (1999) and Wen and Tsai (2006) noted positive perceptions about peer assessment among university students. Moreover, the study which was conducted on the perception of Taiwan students on peer-assessment indicated that the students had positive perception about the assessment method (Wen and Tsai, 2006). From this, it is possible to understand that the result of the current study regarding students' perception on the use of peer-assessment showed consistency with the results of the studies mentioned above.

Conclusions

Quantitative data were collected through questionnaire from the students in the two groups (treatment group and control group) on their writing strategy use. The results of the two groups were compared, and the mean of the students in the treatment group (3.9590) was found to be greater than the mean result of the students in the control group (3.1222). The t-test result was also proved to be significant, and it can be reported as $t(58) = 2.856$, $p = 0.006$. From this, it is possible to conclude that the intervention (peer assessment) helped the students in the treatment group improve their

writing strategy use 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 strategy use" 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 strategy use" is accepted.

The qualitative data, on the other hand, were collected through journal writing. The purpose of collecting these data was to assess the perception of the students in the treatment group regarding the importance of peer-assessment. For this objective, the collected data were analysed qualitatively using descriptive method. The result of the analysis showed that the students positively perceived the importance of using peer-assessment. They reported that it not only helped them improve their writing skill, but it also helped them develop their writing strategy use. This was also proved by the analysis result of the quantitative data stated above.

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Competing interest statement

The authors declare no conflict of interest.

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References

- Amirreza, K. & Amir, R. (2015). An Overview of Peer-Assessment: The Benefits and Importance. Department of Language Teaching, Zanjan Branch, Islamic Azad University, Zanjan, Iran
- Azarnoosh, M. (2013). Peer-assessment in an EFL context: attitude and friendship bias. *Language Testing in Asia*. Retrieved from <http://www.LanguageTestingAsia.com/content/3/1/20>
- Birenbaum, M. & Dochy, F. (Eds.) (1996). *Alternatives in Assessment of Achievement, Learning Processes and prior Knowledge*. Boston: Kluwer Academic.
- Birjandi, P. & HadidiTamjid, N. (2012). The role of self, peer and teacher assessment in promoting Iranian EFL learners' writing performance. *Assessment & Evaluation in Higher Education*, 37(5), 513–533.
- Black, P. & William, D. (1998). *Inside the black box: Raising standards through classroom assessment*. London: Department of Education and Professional Studies, Kings College: Phi Delta Kappan.
- Broadfoot, Patricia, M. (1996). *Education, Assessment and Society: a sociological analysis*. Buckingham UK, Open University Press.
- Brown, S. & Knight, P. (1994). *Assessing learners in higher education*. London & Philadelphia, Kogan Page.
- Carson, J. & Gayle, N. (1994). "Writing Groups: Cross-Cultural Issues." *Journal Language Writing* 3.1:17-30. Print.
- Cavan, S. (1977). 'Investigative Social Review: Individual and Team Field Research'. *The American Journal of Sociology*, 83 (3), 809–11.
- Chamot & Anna, U. (1987). *A Study of Learning Strategies in Foreign Language Instruction*. First Year Report. Interstate Research Associates, Inc.: Rosslyn
- Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London, Thousand Oaks, New Delhi: Sage. A constructivist approach to grounded theory: data are not just found (or 'discovered'), they are constructed.
- Chen, Y. (2008). Learning to self-assess oral performance in English: A longitudinal case study. *Language Teaching Research*, 12(2), 235-262.
- Cheng, W. & Warren, M. (2005). Peer assessment of language proficiency. *Language Testing*, 22(1), 93– 121.
- Chien, S. (2010). Enhancing English composition teachers' awareness of their students' writing strategy use. *The Asia-Pacific Education Researcher*, 19(3), 417-438.
- Cohen, L. Manion L. & Morrison, K. (2005). *Research Methods in Education*. London and New York (Fifth edition).
- Coombe, C., Folse, K. & Hubly, N (2007). *Assessing English language learners*. United State of America: University of Michigan Press.
- Crinon, J. & Marin, B. (2010). 'The role of peer feedback in learning to write explanatory texts: why the tutors learn the most'. *Language Awareness*, 19 (2), 111-128.
- Cowan, J. (2004). Collaborative writing and self and peer assessment. Retrieved 3 May 2009 from <http://iml.uts.edu.au>.
- Cresswell, J. (2014). *Research design: qualitative, quantitative, and mixed methods approaches (4th ed.)*. University of Nebraska –Lincoln
- Crinon, J. & Marin, B. (2010). 'The role of peer feedback in learning to write explanatory texts: why the tutors learn the most'. *Language Awareness*, 19 (2), 111-128.
- Crossman, J., & Kite, S. (2012). Facilitating Improved Writing among Students through Directed Peer Review. *Higher Education Research and Development*, 13(3), 219-229. <https://doi.org/10.1177/1469787412452980>
- Deepti, G. & Getachew Seyoum (2011). The Influence of Motivation and Attitude on Writing Strategy Use of Undergraduate EFL Students: Quantitative and Qualitative Perspectives: *Asia EFL Journal*
- Denzin, N. & Lincoln, Y. (Eds.). (2005). *The Sage handbook of qualitative research (3rded.)*. Thousand Oaks, CA: Sage.

- Diener, E. & Crandall, R. (1978). *Ethics in Social and Behavioral Research*. Chicago: University of Chicago Press.
- Douchy, Y, F., Segers, M., & Sluismans, D. (1999). The use of self-, peer and co-assessment in higher education: A review. *Studies in Higher Education*, 24, 331-350.
- Dochy, F., & Moerkerke, G. (1997). The present, the past and the future of achievement testing and performance assessment. *International Journal of Educational Research*, 27(5), 415 - 432.
- Fernández Dobao, A., & Blum, A. (2012). Collaborative Writing Tasks in the L2 Classroom: Comparing Group, Pair, and Individual Work. *Journal of Second Language Writing*, 21, 40-58. <https://doi.org/10.1016/j.jslw.2011.12.002>
- Ferris, Dana, and John Hedgcock. (2005). *Teaching ESL Composition: Purpose, Process, and Practice*. 2nd Mahwah: Erlbaum. Print.
- Ferris, D. & John H. (2005). *Teaching ESL Composition: Purpose, Process, and Practice*. 2nd Mahwah: Erlbaum. Print.
- Flower, L. & Hayes, J. (1980). The dynamics of composing: Making plans and juggling constraints. In Gregg, W. & Steinberg, E. (Eds.), *Cognitive processes in writing* (pp. 31-50). Hillsdale, NJ: Erlbaum.
- Gatfield, T. (1999). Examining student satisfaction with group projects and peer assessment. *Assessment and Evaluation in Higher Education*, 24(4), 365-377.
- Graham, S. & Harris, K. (2002). Prevention and intervention for struggling writers. In M. Shinn, Stoner, G. & Walker, H. (Eds.), *Interventions for academic and behavior problems II: Preventive and remedial approaches* (pp. 589-610). Bethesda, MD: National Association of School Psychologists
- Graham, S. Harris, K. & Fink-Chorzempa, B. (2000). Is handwriting causally related to learning to write: Treatment of handwriting problems in beginning writers. *Journal of Educational Psychology*, 92, 620-633.
- Graham, M. & Rachel, P. (1995). Using self- and peer-assessment to improve students' essay writing: A case study from geography. Retrieved 6 May 2009 from <http://eric.ed.gov>.
- Gravett, S. and Geysler, H. (2004). *Teaching and Learning in Higher Education*. Pretoria: Van Schaik Publisher.
- Gipps, C. (2001). Socio-cultural perspectives on assessment. In G. Claxton & G. Wells (Eds.) *Learning for life in the 21st century: socio-cultural perspectives of the future of education*, Oxford: Blackwell Publishers.
- Gottschalk, L. (1995). *Content Analysis of Verbal Behavior: New Findings and Clinical Applications*. Hillsdale, NJ: Lawrence Erlbaum
- Hancock, Ch. (1994). *Alternative Assessment and Second Language Study: What and Why?* ERIC Digest ERIC Development Team www.eric.ed.gov Online webpage citation: http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/2a/21/d4.pdf
- Hanna, G. & Dettmer, P. (2004). *Assessment for effective teaching: Using context-adaptive planning*. Boston, MA: Pearson A&B.
- Hanrahan, S., & Isaacs, G. (2010). Assessing self- and peer assessment: the students' views. *Higher Education Research and Development*, 20, 1, 53-70.
- Harris, K., Schmidt, T. & Graham, S. (1998). Every child can write: Strategies for composition and self-regulation in the writing process. In K. R. Harris, S. Graham & D. Deshler (Eds.), *Advances in teaching and learning*. Vol. 2: *Teaching every child every day: Learning in diverse schools and classrooms* (pp. 131-167). Cambridge: Brookline Books
- Hayes, J. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.): *The science of writing: Theories, methods, individual differences and applications* (pp. 1-27). Mahwah, NJ: Erlbaum.
- Hayes, J. (2006). New directions in writing theory. In C. MacArthur, S. Graham & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 28-40). New York: Guilford.

- Hyland, K. (2003). *Teaching and researching writing*. New York: Longman.
- ICDR (1999). *Teacher Education Handbook*. Addis Ababa Finfine Printing and Publishing.
- Johnson-Bogart, K. (2000). *Writing portfolios: What teachers learn from students' self-assessment*.
- Jones, R. (1994). The ethics of research in cyberspace. *Internet Research*, 4, 30–35.
- Joy du Plessis, Diane Prouty, Jane Schubert and Mona Habib (2003). *Continuous Assessment: A Practical Guide for Teachers*. Washington, DC: American Institutes for Research
- Katstra, J., Tollefson, N. & Gilbert, E. (1987). The effects of peer evaluation on attitude toward writing and writing fluency of ninth grade students. *Journal of Educational Research*, 80(3), 168-172
- Kim, S. (2015). Preparing English Learners for Effective Peer Review in the Writers' Workshop. *The Reading Teacher*, 68(8), 599-603. <https://doi.org/10.1002/trtr.1358>
- Klimova, B. (2015). Diary writing as a tool for students' self-reflection and teacher's feedback in the Course of Academic Writing. Retrieved from www.sciencedirect.com.
- Leki, L. (1990). "Potential Problems with Peer Responding in ESL Writing Classes." *CATESOL Journal* 3.1: 5-19. Print.
- Lillis, T. (2001). *Student writing: Access, regulations, and desire*. London: Routledge.
- Maarouf, N. (2012). *The Importance of Continuous Assessment in Improving ESP Students' Performance*. Dissertation: KasdiMerbahOuargla University.
- Mauri, T. & Rochera, M. (1997). Learning to regulate one's own learning. *Aula de InnovacionEducativa*, 67, 48 – 52.
- McCutchen, D. (2006). Cognitive factors in the development of children's writing. In C. MacArthur, S. Graham & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 115-130). New York: Guilford
- Ministry of Education. (2011). *School Based Assessment for Learning Brunei Darussalam: SBAfL, Guidebooks for Year 7 and 8 Core Subjects*. Curriculum Development Department, Ministry of Education, Brunei Darussalam.kjhu
- Moussaoui, S. (2012). An investigation of the effects of peer evaluation in enhancing Algerian students' writing autonomy and positive affect. *Procedia—Social and Behavioral Sciences*, 69, 1775–1784.
- Myunghwan, H. (2017). Development and validation of the English writing strategy inventory: Elsevier journal. Volume 68, August 2017, Pages 60-71
- O'Malley, J. & Chamot, A. (1990). *Learning strategies in second language acquisition*. Cambridge, England: Cambridge University
- O'Neil, G. & McMahon, T. (2005). Student-centered learning: What does it mean for students and lecturers? In G. O'Neil, S. Moore & B. McMullin (Eds.), *Emerging issues in the practice of university learning and teaching* (pp. 27-36). Dublin: AISHE.
- Oxford, R. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House.
- Patton, M. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Quansah, K. (1997). *Monitoring Standards in Basic Education Using Criterion-Referenced Tests*. Accra: Institute for economic Affairs Round Table Discussion Paper: July 18, 1997/Ghana Education Service
- Race, P. (2002). *Evidencing reflection: putting the 'w' into reflection*. Retrieved May 30, 2013, from <http://escalate.ac.uk/resources/reflection/>.
- Razi, S. (2012). *Effects of a metacognitive reading program on the reading achievement and metacognitive strategies*. Unpublished doctoral dissertation. DokuzEylul University Educational Sciences Institution, İzmir, Turkey.
- Ridhuan, M.. & Abdullah, T. (2009). The writing strategies used by Engineering ESL Malay learners. *Conference of the International Journal of Arts & Sciences*. Retrieved December 27, 2010, from <http://eprints.utp.edu.my/2035/www.wales.gov.uk/educationandskills>.
- Riessman, C. (1993). *Narrative Analysis*, Newbury Park, London: Sage. A readable summary of narrative approaches.

- Ritchie, J. & Lewis, J. (eds) (2003). *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. Sage Publications, London. Frame work
- Roscoe, R. D., & Chi, M. T. H. (2007). Tutor learning: The role of explaining and responding to questions. *Instructional Science*. Online First.
- Saddler, B. & Graham, S. (2007). The relationship between writing knowledge and writing performance among more and less skilled writers. *Reading & Writing Quarterly*, 23,
- Sambell, K. & McDowell, L. (1998). The value of self and peer assessment to the developing lifelong learner. In C. Rust (Ed.): *Improving student learning — improving students as learners* (pp. 56–66). Oxford, UK: Oxford Centre for Staff and Learning Development.
- Shehadeh, A. (2011). Effects and Student Perceptions of Collaborative Writing in L2. *Journal of Second Language Writing*, 20, 286-305. <https://doi.org/10.1016/j.jslw.2011.05.010>
- Shepard, L. (2000). The role of assessment in a learning culture. *Educational Researcher*, 29, 4-14. Higher education: a review.
- Sluijsmans, D., Brand-Gruwel, S., & van Merriënboer, J. (2002). Peer assessment training in teacher education: Effects on performance and perceptions. *Assessment & Evaluation in Higher Education*, 27(5), 443-454.
- Sluijsmans, D., Dochy, F. & Moerkerke, G. (1998). Creating a learning environment by using self-peer and co-assessment. *Learning Environments Research*, 1, 293-319.
- Spady W. (1994). *Outcomes-Based Education: critical issues and answers*. Arlington: AASA
- Torrance H (1995). *Evaluating authentic assessment*. Buckingham: Open University Press.
- Wen, M. & Ch-Ch Tsai. (2006). “University Students’ Perception of and Attitudes toward (Online) Peer-assessment.” *Higher Education* 51 (1): 27–44.
- Wikstorm, N. (2007). *Alternative assessment in primary years of international baccalaureate education* (Master's thesis).
- Wodak, R. & Meyer, M. (2001). *Methods of Critical Discourse Analysis*. London: Sage.
- Zakhe, F. (2007). *The Role of Continuous Assessment in Primary School*. University of Zulu Land: published MA Thesis.
- Zeineb, A. (2017). *Peer and Teacher Assessment in EFL Writing Compositions: The Reading Matrix: An International Online Journal*, Volume 17, Number 1, April 2017
- Zhu, W. (1994). Effects of training for peer-revision in college freshman composition classes. *Dissertation Abstracts International*, 55, 951.
- Zhu, W. (1995). Effects of training for peer response on students' comments and interaction. *Written Communication*, 12, 492-528.