



This work is licensed
under a Creative
Commons Attribution
4.0 International
License.

Online peer assessment in paragraph writing: Its implementation and students' constraints

Desi Wijayanti Ma'rufah

UIN Saizu Purwokerto, Indonesia
desiwijyantim@uinsaizu.ac.id

Maulana Mualim

UIN Saizu Purwokerto, Indonesia
maulanamualim@uinsaizu.ac.id

Fathin Anjani Hilman

UIN Sunan Gunung Djati Bandung, Indonesia
fanjanih@uinsgd.ac.id

Peer Assessment (PA) has recently been gaining increasing popularity in higher education due to its advantages in engaging students, and its use in English as a Foreign Language (EFL) writing classes is very common in Indonesia. The implementation of PA became more necessary when the government regulated emergency remote teaching in response to the COVID-19 crisis. This study examines the implementation of an online peer assessment (OPA) and the constraints encountered by the students in the OPA of a paragraph writing class. To achieve the objectives of this study, an embedded mixed method design was employed, which consists of an interview, observations, documentation, and a survey. The respondents in this study are a teacher of the writing class and 30 English Education Department students of a state university. The gleaned qualitative data were analyzed thematically while the quantitative data were analyzed by finding the percentages generated by Google Forms. The results show that the teacher made use of the three stages of the OPA: preparation, instruction, and evaluation. The students faced three constraints: the quality of the feedback, impartiality, and the clarity of the assessment criteria. It is recommended that when performing an OPA, teachers provide clear instructions regarding the stages and pay attention to the issues experienced by students.

Keywords: assessment, EFL, emergency remote teaching, online peer assessment, writing class



The
JALT CALL
Journal
vol. 20 no.1

Introduction

Writing is seen as an essential part of learning and when it is done in a productive manner, it is considered to be an indicator of a successful learning process (Geiser & Studley, 2002). However, in EFL classrooms, writing is commonly perceived as the most difficult skill to learn (Klimova, 2014), which may demotivate students. Moreover, in the current situation caused by the COVID-19 pandemic where the students are forced to learn remotely, their disengagement resulting from the lack of in-person interaction made writing classes less stimulating, thus negatively affecting their motivation. Online peer assessment (henceforth, OPA) could be an alternative to rectify this issue because it could pique the students' interest and subsequently get them more engaged in the remote teaching and learning process (Indasari et al., 2019).

In recent decades, PA has been increasingly used in higher education, which has been driven by the changing conceptions of teaching and learning (Lindblom-ylänne et al., 2006; Spiller, 2012), including the shift in assessment methods from traditional to alternative ones (Brown & Abeywickrama, 2010). McGarr and Clifford (2013) are among the researchers who support the value of OPA as a method of assessment for learning. According to them, OPA does not connote judgment and certification, but rather it unleashes students' potential to contribute to learning, and their student-respondents found it a stimulating activity. Spiller (2012) advocates the value of OPA as a kind of constructivist assessment to go along with constructivist learning. In OPA, students have the opportunity to get involved in the dialogue and co-construction process of knowledge. Collaborative assessment is more constructive rather than judgmental (Mualim & Aziez, 2020). Lu & Zhang (2012) demonstrate in their research how OPA activities, rubric-based assessment, and peer feedback, affected students' learning performance positively. Azarnoosh (2013) shows his confidence in OPA as a worthwhile alternative assessment that could motivate students' contribution to the learning process, and his findings indicate students' positive attitudes toward it. Rosa, Coutinho, and Flores (2016) explored the use of OPA and concluded that OPA could be used as a strategy to promote assessment for learning.

As much as its success, literature also reveals some pitfalls of OPA. Kaufman and Schunn (2011) investigated students' perception of OPA resulting in three negative perceptions, namely: 1) students are unqualified in doing assessment, 2) peer assessment is not a fair form of evaluation, and 3) the feedback from peers is not useful. McGarr and Clifford's (2013) respondents, after expressing their enjoyment in doing OPA, do not view OPA as a fair method of assessment. The only value of being assessed by their peers is receiving more feedback. Rosa et al. (2016) state that current literature identifies the need to improve students' competence in performing OPA on a regular basis.

PA that is done virtually with the intent to initiate more student involvement

in remote teachings is not a simple process. Though findings on the success and pitfalls of OPA are abundant, the literature has not revealed much about its step-by-step implementation and the obstacles faced by the students. This study is aimed at addressing the mentioned two points. The research questions of this study are: (1) How was online peer assessment (OPA) implemented in a paragraph writing class in Indonesia? and (2) What were the constraints faced by the students in doing the OPA?

Literature review

Writing in English as a Foreign Language

Writing, as one of the productive skills (Mualim & Aziez, 2020), plays an important role in the process of gaining competency in a language. However, it is believed to be the most difficult skill to learn (Alisha et al., 2019; Anh, 2019; Ibnian; 2017). The challenges it poses could be attributed to a lack of grammar competency, inadequate vocabulary, a lack of motivation and/or confidence, fear of making errors, difficulty in expressing ideas, and an insufficient amount of materials that have been read (Alisha et al., 2019; Belkhir & Benyelles, 2017; Hilman, 2017).

In Indonesia, English is regarded as a foreign language and the teaching process heavily emphasizes reading comprehension and mastery of grammar. However, many students have limited opportunities to acquire proficient writing skills. A study by Ma'rufah, Muflihah and Awaliyah (2021) showed that most new students at the English Education Department of the State Islamic Institute of Purwokerto demonstrated limited, poor abilities when it comes to their writing skills. This could be attributed to the lack of training in writing before entering college (Keong & Mussa, 2015). White and Hall (2014) surmise that writing becomes a complicated task for EFL learners at the tertiary level because it is often ignored in the early grades. Additionally, large class sizes can also be an impediment in acquiring writing skills, particularly if individual works are to be assessed (Hsien, 2009).

Taking into account the above-mentioned issues, since good writing is an essential prerequisite to finding success in academic fields (Husin & Nurbayani, 2017), Supriyadi (2015), Fatimah and Masduki (2017) suggest that EFL teachers should design a course that encourages students' engagement in writing tasks. One of the ways to accomplish the latter is to provide PA in writing class.

Technology-enhanced writing in EFL and feedback

Today, writing in EFL has shifted from handwriting to computer typing (Zaini & Mazdayasna, 2015). Technology such as Microsoft Word provided several advantages for EFL writing. For example, the copy-and-paste features make the drafting process more convenient compared to handwriting where students need to write, erase, and rewrite. Grammatical errors can be easily identified through the grammar-checking feature in the software. And teachers easily

give feedback through track changes and comment bubbles (Ene & Upton, 2014). The Internet has enhanced writing activity multiply for instance by facilitating distance joint work. Google Docs and Microsoft Word 365 enable students to work together in one single file while they reside in different places (Abrams, 2019).

Other than that, technology altered the process of written corrective feedback (WCF). Research by Rofiah et al. (2023) reveals students' improved ability in writing after undergoing Padlet-mediated feedback for 16 meetings. Afifi et al.'s (2023) respondents needed a shorter time to receive WCF and correct them on the Writing Mentor application. While the WCF in the application is generated immediately, those provided by the teacher took three days to complete. Barnes' (2023) research delineated that WCF on Moodle recorded students' attitudes toward take-home feedback revision. The students did not check the feedback. Hence, a revisit to the take-home assignment policy was called. While previous research provided information on how technology enhanced the teaching of EFL writing skills, this study emphasized the step-by-step implementation of OPA in the Indonesian context.

Peer assessment

PA is generally defined as an arrangement for peers to evaluate the quality, outcomes, and performances of their fellow students by using specific criteria and by giving comments, judgment, and/or grades (Bryant & Carless, 2010; Spiller, 2012). Peer assessment is not only a grading procedure but is also part of a learning process that could further enhance academic skills (Dochy et al., 1999).

Given its many uses in offline classes, PA is also worth considering to increase the effectiveness of online teaching and learning. Implementing OPA offers students and teachers advantages in various respects. For example, students can communicate, reflect on and revise their work with peers (Yang, 2011); students are more willing to get involved in the activity (Lin et al., 2001; Tsai, 2009); teachers can intensively monitor the student's activities and progress (Lin et al., 2001); the assignment results can automatically be recorded in the system, which makes it easier for the teachers in terms of marking (Tsai, 2009); and students feel entrusted with responsibilities in PA that contributes to the final score (Lindblom-ylänne et al., 2006; Topping et al., 2000). PA can also encourage collaborative learning courtesy of an interchange regarding what constitutes an acceptable standard of work (Spiller, 2012). Students who receive feedback from their peers are exposed to a wider range of ideas about their work, which may promote personal development and contribute to self-improvement (Spiller, 2012).

Peer assessment in writing

In writing classes, PA is applied by making judgments as well as providing feedback, and assigning grades to the peers' works. In practice, PA can be implemented in writing classrooms in the form of revising written works (peer

editing), proofreading, and setting goals to increase opportunities for written expression (Brown, 2001). This entails having students pair up and read their works to each other (O'Malley & Pierce, 1996). The next step is for students to exchange their works and use a scoring rubric to rate them. The students are then allowed to edit and rewrite their works. Assessing one's writing by using PA is regarded as an example of a direct evaluation to measure a specific performance. In this regard, the taxonomy of PA can be taken as the guideline to implement this activity. It is divided into (i) revising written works on your own, (ii) revising written works with a peer (peer editing), (iii) proofreading, (iv) using journal writing for reflection and assessment, and (v) setting goals for creating/increasing opportunities for writing (Brown & Abeywickrama, 2010).

Experts claim that PA plays an important role in teaching students how to express themselves in writing. Spiller (2012) states that PA can be used very effectively in developing students' writing skills. Teachers of writing classes are required to provide more feedback on their students' works and allow them to practice a wider range of skills that are key to the development of their writing ability, such as meaningful interactions with peers, greater exposure to ideas, and new perspectives on the writing process. Azarnoosh (2013) also notes that peer review sessions can teach students important writing skills, such as writing to a real audience, familiarizing them with new ideas and viewpoints that are different from their own, (Paulus, cited in Azarnoosh, 2013) and discusses how to revise writing effectively.

However, teachers should also consider the drawbacks of PA before offering such an opportunity to students. Harris and Brown (2013) reported that students often ignored their peers' feedback because they preferred assessments from teachers compared to those made by their peers. Students tend to compare their works with those of their peers while giving feedback resulting in lack of impartiality in rating (Topping, cited in De Grez, Valcke, & Roozen, 2012). PA is also prone to bias and subjectivity especially when the works are not double-blinded (Bamberger et al., 2005). Rollinson (2015), however, points out that some students may not be sufficiently confident to pass judgment on their peers' writing while others may feel that the PA is unfair because they perceive the final result as being undeserved. Lastly, there must be clear assessment criteria that are regarded as guidelines to be adhered to by the students. Students should be allowed to get enough practice before they are expected to start with the process of assessment. The more they engage in peer assessment while guided by clear assessment criteria, the more familiar they become with the standards for evaluation and the more likely they are to apply them successfully (Foley, 2013).

Method

This study aims to describe the implementation of an OPA and to reveal the students' constraints in doing the OPA in a paragraph writing class at the English Education Department of the State Islamic Institute of Purwokerto (IAIN Purwokerto). An embedded mixed method (Creswell, 2014) was employed

intending to collect qualitative and quantitative data sequentially by prioritizing the qualitative data over the quantitative ones (Creswell, 2014). That is to provide comprehensive qualitative information with quantitative data embedded in it.



Respondents

A teacher and 30 students of a paragraph writing class at IAIN Purwokerto were invited to participate in this study as respondents. The respondents were selected by applying a purposive sampling technique, considering that the teacher had been implementing this technique in her writing classes for years. The teacher was female and 27 years old. She had seven years of experience in teaching English, with the last three of these years focused on instructing adult learners. Her BA and MA degrees are both in English Education. The students were those sitting in the second year of the English Education Department, with all of them being either 19 or 20 years old. Their names in this study were masked in codes of S1 for student 1, S2 for student 2, S3 for student 3, and so forth. The majority of the students had an intermediate level of English proficiency and they had been learning English for seven years in formal schools. All respondents were native speakers of Indonesian, so they perceived English as a foreign language.

Instruments

The data collection instruments used were an interview guide, an observation checklist and field notes, a document analysis sheet, and a questionnaire. The interview guide consisted of questions to investigate the process of OPA in paragraph writing class. The interview results were used to explain the implementation of OPA and to better gauge the result of the students' survey. The main indicators of the interview, observations, and documentation are the procedure of implementing OPA in writing and the constraints faced by the students in the OPA.

Observations were conducted by using observation checklists and field notes. The observation checklist consists of several indicators synthesized from several theories of PA (Brown, 2001; Brown & Abeywickrama, 2010; O'Malley & Pierce, 1996). The field note was used to record the detailed process of the implementation.

Documents such as the lesson plan, assessment rubric, and the students' OPA works were analyzed by referring to the document analysis sheet. The document analysis sheet was used to guide the analysis aiming to find descriptions of OPA implementation and identify problems faced by the students.

In the questionnaire, there were ten close-ended three-point Likert scale questions and two open-ended questions. They were delivered to the students-respondents via Google Forms. This instrument was adapted from McGarr and Clifford (2013), which had a closely related study purpose and had indicators following the PA theory. Both McGarr and Clifford's and the current study's

instruments were prepared for university students. Out of 17 questions prepared by McGarr and Clifford, it was decided to adopt ten questions for their compatibility with the indicators of this study. Question 1 (hereinafter referred to as Q1, Q2, etc.) to Q3 were in accordance with the first indicator, i.e., on the student's attitude toward OPA, Q4 to Q6 were with the second indicator, i.e., on the peers' feedback, Q7 to Q8 were with the third indicator, i.e., on peers' impartiality, and Q9 to Q10 were with the fourth indicator, i.e., on the assessment criteria. Two open-ended questions were added to elicit the students' constraints in OPA. Modification to the questionnaire was made, such as all "peer assessment" phrases being replaced with "online peer assessment" and "I was reluctant to give low marks to my peers" being replaced with "When doing OPA in paragraph writing, I feel objected to giving low marks to my friends". Additionally, to avoid misunderstanding, all questions were formulated in the Indonesian language.

Data collection procedures

Data were collected by implementing four data collection techniques: an interview, observations, documentation, and a survey. The interview was done to gather information on the implementation of the OPA as well as the problems faced by the students from the perspective of the teacher. The observations and document analyses were subsequently done to triangulate the data yielded from the interview. This was done to ensure the credibility and trustworthiness of the data used in this research (Noble & Heale, 2019). Finally, a survey was administered to the students to collect generalized data on the problems faced by the students.

The interview with the teacher was conducted in February 2021 for one hour. It was a semi-structured interview done in an informal mode by using the Indonesian language as the medium of communication. This was done so the teacher could express her idea freely without any linguistic barriers. Five questions in the interview guide representing five big themes of the research were addressed to elicit information on the implementation of the OPA and the constraints faced by the students. The observations and document analyses were done jointly in two teaching sessions on two different days in February. The observations were made during the teaching activity while the document analyses were performed subsequently. Afterwards, an online questionnaire was sent to the students via Google Forms.

Data analysis

The data of this research were obtained through the process of analyzing, coding, categorizing, synthesizing, and reducing the information from the collected data (Fraenkel et al., 2012; Gay et al., 2012). The data analysis was conducted using indicator analysis. This indicator analysis was developed by synthesizing several previous pieces of research (Bamberger et al., 2005; Brown, 2001; Brown & Abeywickrama, 2010; De Grez et al., 2012; Foley, 2013). Specifically, to

analyze the implementation of PA, the indicators of analysis were derived from Brown (2001) and Brown & Abeywickrama (2010). To determine the students' perception, the indicators about aspects of considerations in providing PA were adopted from Bamberger et al. (2005); De Grez et al. (2012); and Foley (2013).

The data from the interview were transcribed into a document, and they were combined with those of the observations and documentation. The data were then examined, coded, and categorized into several themes by two experts. These experts were two associate professors who were experienced in conducting a thematic analysis. The rigor of the coding process was achieved by the agreement of the two experts in deciding the codes (Creswell, 2013). The coding process was conducted firstly by giving codes to the transcript, then grouping codes into the concepts of implementing PA, and similar concepts were grouped into categories. From the categorization of the data, the findings that emerged were revealed and any unrelated information was eliminated. Finally, the overall data were interpreted, displayed, and returned to the teachers for internal validity check (Dörnyei & Griffee, 2010). Meanwhile, data from the questionnaire were tabulated into percentages which were generated automatically from Google Forms. Finally, a professional translator was hired to translate the analyzed data into English.

Findings

The implementation of online peer assessment in paragraph writing

When the COVID-19 pandemic first started to affect Indonesia in early 2020, all classes in higher education were switched to online modes, including those involving the evaluation of students' work. In the interview, the teacher expressed that OPA was taken to encourage greater student engagement in online learning.

Further explanation of the OPA implementation based on the themed data in Table 1 is presented in the following section. The teacher applied the OPA in three stages, namely preparation, instruction, and evaluation of the results.

Table 1. The implementation of online peer assessment

Theme	Subtheme	Code	Interview excerpt	Field note excerpt
Implementation	Preparation	<ul style="list-style-type: none"> ▶ Selecting topics ▶ Formulating assessment criteria ▶ Formulating procedures in PA ▶ Finding an online platform 	<p>"I usually consider a task that is easy for the students to do PA. I know my students' proficiency, so I will not give them a task that they are not capable of doing"</p> <p>"I chose Google Classroom, it is very well-known to my students"</p>	<p>- In the first meeting, the teacher asked the students which online platform is most convenient for them, the students mentioned "Google Classroom"</p>
	Instruction	<ul style="list-style-type: none"> ▶ Instructing how to write a good paragraph ▶ Explaining the procedure of OPA ▶ Explaining the rubric for assessing the students' peer works 	<p>"After explaining the materials on paragraph writing, I explained what they should do in assessing their peers' works based on the assessment criteria"</p> <p>"They needed to assess three aspects of paragraph writing, namely the organization, the ideas, and the mechanic"</p>	<p>- The instruction on paragraph writing was done virtually on Google Meet</p> <p>- The teacher demonstrated how to upload the writing works on Google Classroom, how to give comments, and how to rate the works</p> <p>- The teacher emphasized this stage since she thinks this stage is very important</p>
	Evaluation	<ul style="list-style-type: none"> ▶ Evaluating the students' writing works ▶ Reviewing how the students give feedback to their peers ▶ Scoring the students' ability in PA 	<p>"I reviewed the students' progress from the PA and then discussed the feedback in the classroom" * "I could look at all the comments and the student's progress on Google classroom since they use docs with activated comment features" * "I assess their peer editing ability"</p>	<p>- The teacher evaluated the students' writing works</p> <p>- The teacher explained the frequently made errors found in the students' writing works</p> <p>- The teacher provided individual writing feedback</p> <p>- The teacher reviewed some assessments made by the students for their peers</p>

Preparing an online peer-assessment

The teacher made several preparations before assigning the activity. The teacher started by selecting an appropriate topic for the paragraph writing activity. The teacher chose a topic that she believed was in accordance with the competency level of the students.

Next, the teacher compiled the assessment criteria that were to be distributed



to the students and serve as a guideline for the assessment. The teacher then designed the activities to be completed by the students as part of the peer assessment, namely exchanging texts, giving feedback to peers, and providing peer editing. Finally, the teacher selected an online platform on which the students could complete the activity. Among the many well-known learning management systems (LMS) available on the Internet, Google Classroom was selected by the teacher due to its increasing popularity among the students during the research period.

Giving instructions for the online peer assessment to the students

The second stage in conducting the OPA is explaining the step-by-step procedure for doing the assessment virtually. Before issuing the instructions, the teacher highlighted the material which had been taught.

In the interview, the teacher explained how she gave instructions of doing OPA to the students. The instructions were presented virtually on Google Meet. The teacher explained both the material that had been taught and the procedures to be followed in conducting the OPA. Assessment criteria were delivered to the students before conducting the OPA. The teacher mentioned three aspects that need to be assessed by the students in paragraph writing, i.e. organization, ideas, and mechanics.

The teacher provided how the students conducted the OPA; namely, the students had to use Google Docs for providing feedback and assessing their peers, and then the students submitted the Docs on Google Classroom. The teacher emphasized how critical this stage was for the success of the OPA. Instructions on the materials, assessment criteria, and technical procedures played an important role in the OPA, and therefore they needed to be explained clearly to the students to avoid misunderstandings.

The data from the observations reveal that during the teaching process, after a discussion on the materials, the teacher gave an assignment to the students i.e., writing a paragraph at home. The detailed instructions for the assignments were delivered by the teacher, and the procedures of doing the OPA were also explained in the classroom. Afterward, the teacher invited the students to pick a peer for their OPA activity.

The specific procedure for conducting OPA was described by the teacher. Once the writing assignment was completed, the students were to exchange their work with their peers. They were instructed to read their peer's work, check the errors, and provide feedback. Additionally, the students were to give comments on the content, organization, and mechanics of the paragraph using Google Docs. At this stage, the teacher asked the student to perform the OPA procedure. This consisted of uploading, commenting, and downloading documents on Google Docs and subsequently uploading, commenting, and downloading the documents on Google Classroom. After explaining the technical arrangement of the OPA, the teacher went on to explain how to rate the writing works while showing the assessment rubric on the slideshow. There are three aspects in the evaluation criteria for assessing students' paragraph, namely,

organization, ideas, and mechanics. For assessing the organization and ideas, the students were to rate 0 (zero) should the texts did not meet the criteria or 10 (ten) if the criteria were satisfied. In assessing the mechanics, the students were to score 0 (zero) if the title did not contain appropriate punctuation and capitalization or 4 (four) if it did. In assessing punctuation, capitalization, and sentence structures the students were to rate from 1 (one) to 4 (four) according to the numbers (many/some/few/no) of the errors. A score 1 (one) is for the texts with many errors and 4 (four) for those with no errors. The evaluation criteria are presented in Table 2.

Table 2. Evaluation criteria

No	Aspects	Criteria	Points
1	Organization	1. Does the paragraph have a title?	0/10
		2. Does the paragraph have a topic sentence?	0/10
		3. Does the paragraph have enough supporting sentences?	0/10
		4. Does the paragraph have a concluding sentence?	0/10
2	Ideas	1. Can you understand the paragraph easily?	0/10
		2. Does the paragraph have a clear topic sentence?	0/10
		3. Does each supporting idea in the body paragraph relate to the topic sentence?	0/10
		4. Does the conclusion restate the topic sentence and summarize the ideas?	0/10
3	Mechanics	1. Does the title have appropriate punctuation and capitalization?	0/4
		2. Does the paragraph have many/some/ few mistakes of punctuation?	1-4
		3. Does the paragraph have many/some/ few mistakes of capitalization?	1-4
		4. Does the paragraph have many/some/few mistakes of sentence structure?	1-4

The implementation of the OPA in the paragraph writing class of IAIN Purwokerto was in accordance with Brown's (2001) and Brown & Abeywickrama's (2010) recommendation to implement PA when teaching writing. This was intended to provide students peer learning opportunities. These steps of PA were conducted in line with O'Malley & Pierce's (1996) direction, i.e., the students worked in pairs to check their work and rate them.

Reviewing the results of the students' assessment

After the students were finished with the PA and submitted the assessed works on Google Classroom, the teacher reviewed their assessment works and followed this up by providing her feedback. The feedback given by the students to their peers was recorded on Google Docs, which allowed the teacher to monitor the progress of all the students' writing performances. In addition, the teacher gave individual feedback on the students' peer-editing works.

The review process was performed on Google Meet. The observations showed that the teacher discussed the most frequently made errors found in the students' work. The teacher's feedback was aimed at emphasizing the already given materials on paragraph writing, reviewing the students' ability in peer-editing, and motivating them to improve their writing performance. Besides, the teacher also gave individual feedback to the peer-editing works, especially on errors that were not in the group of the frequently made errors. The teachers checked the organization, ideas, and mechanics of the paragraph, gave comments on the student's progress, and conveyed motivating words.

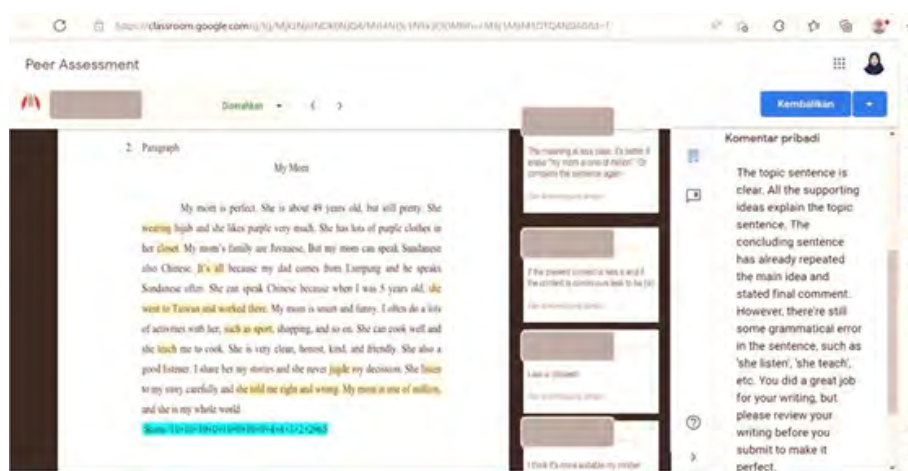


Figure 1. Teacher's feedback on individual work

Figure 1 shows a sample of the individual feedback process. The teacher reviewed the students' writing work and the peer's feedback and rating. She gave feedback and motivational remarks.

Students' constraints in online peer-assessment

Although the OPA in principle offers several benefits in enhancing the student's performance and engagement, three constraints were noted from the interview with the teacher and documentation. The constraints were related to the quality of the feedback offered by the students (peers), impartiality, and the clarity of the assessment criteria. Table 3 contains excerpts from the interview with the teacher and documenting the OPA results.

Table 3. Students' constraints from the teacher's perspective

Theme	Subtheme	Code	Interview excerpt	Documentation
Constraints	Peer feedback quality	Poor quality of feedback	"I found some feedback that was incorrect"*"Some grammar errors were not checked"	Some grammar errors were left unchecked
	Impartiality	Tendency to give a subjective assessment	"Some students tended to give good rates/grades to their close friends"*"Some comments were not in line with the work, for example, a student commented 'very good' to a work that need a lot of revision"	Some works showed many errors but were rated highly
	Clarity of assessment criteria	Some students failed to comprehend the assessment criteria	"From the student's feedback, I realized that many of them did not understand the criteria very well"	Many students did not comply with the assessment criteria

Much feedback given by the students was correct and appropriate, but there were exceptions; for example, a student suggested to his peer to always put the main idea at the beginning of a paragraph while it could be put in the middle or at the end of the paragraph. Some grammatical errors were also noticed to be unchecked. Some students were seen to give an impartial assessment, i.e., good comments and rates for their close friends. The teacher realized that she had to revise the assessment criteria so it would provide clearer and more detailed information. The embedded quantitative data collected through surveys filled out by the students provide further explanation of the constraints faced by them.

The quality of peer feedback in the OPA

Giving feedback was the first constraint faced by the students. Peer feedback refers to providing comments on the quality of a peer's work (Falchikov, 2001). Questionnaire data show that most students (60%) did not find it difficult to assess the technical aspects (mechanics/organization) of the paragraph, some of them (32%) expressed neither agree nor disagree with the question, and a few (8%) found it difficult. As for the evaluation of the contents of the paragraphs, most students (45%) found it difficult to complete this task, some of them (39%) expressed not being sure of the statement, and a few of them (16%) stated they could assess them easily. These perceptions were further corroborated when most of the students (44%) expressed the sentiment that they did not have the skills and knowledge to assess their peers' works, some of them (32%) offered undecided responses, and a slightly smaller portion (24%) felt they possessed the skills and knowledge. These results are displayed in Table 4.

Table 4. Students' perception of the feedback from peer

Statement	Agree	Neutral	Disagree
It felt difficult to assess the technical aspects of writing	8%	32%	60%
It felt difficult to assess the content-related criteria	16%	39%	45%
I did not feel I had the skills and knowledge to assess my peers	24%	32%	44%

Furthermore, by answering the open-ended questions, the students explained their issues by giving feedback in the OPA. Most of them stated that they had found it difficult to assess the contents of their peers' works because it required them to have mastery of the material. Some students explained that the topic was too complex, which precluded them from understanding the different thematic strands. Many of them expressed that assessing the idea organization was difficult and required critical thinking. One student declared that he still found it difficult to assess the technical aspects of the paragraphs. Additionally, the online setting of the activity troubled them, as they were not in a position to ask the teacher directly when they encountered problems. This finding is in line with Saito & Fujita's (2004) statement that students often feel discomfort and find it difficult to edit their peers' works. Here are excerpts of the students' statements regarding the difficulties experienced in giving proper feedback:

Excerpt 1 of open-ended questions

Researcher (henceforth, R): What are aspects you consider when you assess your friend's work? Can you share it with me?

S1: I don't understand the content of the paragraph writing. I find it easier to merely assess the technical aspects.

S13: When it is online, I can't ask the teacher.

S17: In my opinion, the most difficulty I felt in assessing peers on online paragraph writing is that I still lack sufficient confidence in my abilities. So sometimes I want to correct but I am afraid that what I am correcting will not be right.

S22: It is related to my knowledge that I offer my judgment on peer assessment. I doubted my skills.

The teacher stated that many students did not comply with the procedure of the OPA, so they did not perform as expected. Many of them did not offer constructive and informative feedback to their peers, i.e., the comments were of insufficient length, and many of the students focused too much on the technical aspects of paragraph writing at the expense of reviewing the paragraph's contents.

Students' impartiality in online peer assessment

The students' impartiality in peer assessment is another constraint that should be addressed. The interview results show that it was hard for the students to be objective during the OPA. Three statements provide evidence of this being a recurring issue.

Firstly, 53% of the students admitted that they found it difficult to remove their personal feelings in grading their peers' works, 36% of them provided a neutral answer in which they neither agreed nor disagreed with the statement, and only a few of them (11%) rated themselves as being objective while doing the OPA. In addition, the students were reluctant to give low marks to their peers, as evidenced by 45% of the students agreeing with this statement, 42% of them not expressing an opinion, and a handful of them (13%) disagreeing (willing to give low marks if they felt their peers deserved it). However, in terms of giving constructive feedback, 56% of the students could not assess if they were in a position to offer criticism of their peers, 26% of them expressed such a willingness and 18% of them were unwilling to give critical feedback to their colleagues.

Table 5. Students' perception of the level of impartiality of their PA

Statement	Agree	Neutral	Disagree
I found it difficult to remove personal feelings from the grading process	53%	36%	11%
When doing OPA in paragraph writing, I feel objected to giving low marks to my friends	45%	42%	13%
I was reluctant to be critical of my peers	18%	56%	26%

The following answers to the open-ended questions further delineate the low level of the students' impartiality in doing the PA. Nine students conveyed that it was hard to be objective in doing the assessment, as they could not remove personal feelings while grading their peers' works. Here are some excerpts.

Excerpt 2 of open-ended questions

R: What are the difficulties in assessing your friend's work?

S3: The difficulty I experience when assessing my friends is that I feel difficult [bad] when I have to criticize or assess the results of their assignments when there are many mistakes in terms of punctuation, grammar, capital letters, text structure, and so on. Sometimes when I judge my friends, I feel afraid that they will be offended by my criticism of judging them.

S4: I'm also influenced by my personal feelings/taste in writing.

S29: I still feel difficult [bad] if I give low marks to my friends

The excerpts above show how personal feelings greatly influenced the students' decisions while assessing their peers' work. The students conceded that knowing whose work is being assessed affects their impartiality in grading it. Some students were anxious that the nature of their feedback might affect their relationships with their peers outside the classroom.

Throughout the interview, the teacher displayed sufficient awareness of this constraint. She observed that many students showed a lack of impartiality when it came to the works of their classmates, especially close friends. To

rectify this issue, the teacher tried several strategies. To take one example, she distributed the students' work randomly, essentially precluding them from having to grade their close friends' work.



Clarity of the assessment criteria

The third constraint faced by the students in doing the OPA is the clarity of the assessment criteria. The assessment criteria are one of the essential aspects of PA as they guide the students when assigning grades and offering feedback. The students displayed hesitancy while assessing their peers' works because they were not sure what constituted an acceptable piece of written work. The results of the questionnaire show that most of the students (64%) expressed fair-mindedness regarding the statement "I understood the assessment criteria well" meaning that the students were unsure whether they had a good grasp of the criteria. Those who agreed and disagreed with the statement represented equal percentages (18% each). The results of this outlined constraint are shown in Table 6.

Table 6. Students' perception of the assessment criteria

Statement	Agree	Neutral	Disagree
I recognized the assessment criteria well	18%	64%	18%

The data presented above are further corroborated by the students' statements in response to the open-ended questions. Answering the questions "How did you assess your peer's work? Did you find any problems?", several respondents were candid in sharing their difficulties in doing the assessment, namely in understanding the assessment criteria. They admitted that they did not comprehend the assessment criteria very well.

Excerpt 1 of open-ended questions

R: How did you assess your peer's work? Did you find any problems?

S10: Yes, in the case of the criteria of assessment. The teacher did not give detailed criteria. I just used my criteria for good writing.

S12: Yes, I did. Since I have to assess many aspects of writing, sometimes I miss certain aspects of writing that need to be assessed.

S24: Because I do not know the criteria for evaluation clearly, it's difficult to judge other people's works because I have not gone into the details of the material and the assessment procedures too deeply.

The above statements testify to the students' confusion in assessing their peers' written works because assessing certain aspects of a paragraph requires complex analysis. They stated that the teacher did not give a clear explanation pertaining to the criteria that they should refer to in assessing their peers' works, so they consequently felt the need to use their own criteria.

When responding to the question "How did you provide the assessment criteria to the students?", the teacher confirmed that she had put together a

written document with the criteria followed by an explanation. However, the teacher was unsure if the students had paid attention to and understood the criteria sufficiently well. She also clarified that the students tended to be silent and were not maximally engaged in the learning process, hence she could not figure out the exact levels of their understanding.

Discussion

Regarding the implementation of the OPA in the paragraph writing class, there were three stages implemented by the teacher, namely preparation, instruction, and evaluation. Preparing the assessment criteria had a pivotal role during the first stage. The significance of preparation is emphasized by Foley (2013), who believes that it is the best way to avoid misunderstandings on the part of students as to how to properly perform an assessment. As for the designed activities regarding peer feedback and peer editing, they were found to be in line with Brown and Abeywickrama's (2010) statement that the two techniques are appropriate for assessing one's writing. Google Classroom was picked as the medium in the OPA for its popularity and affordability for students. This is in sync with Mualim, Ma'rufah, and Sartika (2019) who found that Google Classroom was an enjoyable LMS for the students. The second stage was giving technical instructions on how to perform the assessment. The key ingredient to the success of this assessment is ensuring that all students understand what their tasks are. Azarnoosh (2013) and White (2009) suggest that students must be given a specific amount of time to familiarize themselves with the PA. The third stage was evaluating the students' assessment results. The teacher checked the students' work one by one and tabulated the technical and content-related problems when it came to the assessment. Many students displayed an interest in this novel learning technique and the teacher noticed an overall improvement in their writing ability. Tseng and Tsai (2007), Gielen, et al. (2010), Spiller (2012), and Chetcuti and Cutajar (2014) note that PA could improve the writing performance of students.

Even though several successes were identified as part of the OPA, a few pitfalls were observed as well. The field data indicated that most of the students could not do the OPA properly. This data further corroborates Saito and Fujita's (2004) statement that assessing the works of their peers is not an easy task for students. The constraints faced by the students of IAIN Purwokerto in the OPA activities fell into three categories; quality of the feedback provided by the students; lack of impartiality, and unclear assessment criteria.

The first constraint concerns the offering of quality feedback. Feedback is an essential aspect of an assessment. In performing an assessment, feedback was found to be more important than grades (Liu & Carless, 2006). With proper feedback, the students could then revise and edit their works to improve their writing competency. Peer feedback refers to providing comments on the quality of a peer's work (Falchikov, 2001). The findings show that the students faced several constraints in providing feedback on their peers' works, specifically in commenting on the technical aspects and the content of the paragraph writing.

The students felt that since they had not mastered the material, they were not sufficiently competent to give content-related feedback. This result agrees with the findings of Cheng & Warren's (2005) as well as Foley's (2013) research, which conclude that students felt uncertain about their ability and knowledge to assess their peers' language proficiency. These insights also corroborate Lindblom-ylänne's et al. (2006) data that students generally find it difficult to assess content-related criteria.

The second constraint has to do with impartiality. Though Sluijsmans' et al. (2004) research concluded that PA in higher education is fair and accurate, the finding at IAIN Purwokerto was different. The students regarded it as difficult to give objective feedback to their peers. This finding is supported by Foley (2013) who stated that students assign good or bad marks depending on whose work they assess. Furthermore, the students indicated that offering criticism to their peers was an onerous task, as they worried that any critical remarks could affect their relationship with them. This further corroborates the findings of Lindblom-ylänne et al. (2006) who noted that being critical of one's close friends was a major challenge from the standpoint of most people.

The third constraint relates to understanding the assessment criteria. Clear assessment criteria and detailed step-by-step procedures were found to be very important for a successful PA. Foley (2013) suggests that the students will be more likely to internalize the assessment criteria if provided with clear instructions for performing the assessment. However, in this instance, most students expressed the viewpoint that they did not fully understand the assessment criteria.

Conclusion

This study intended to describe the implementation of an OPA in a paragraph writing class and investigate the constraints faced by the students. The present study reveals that there were three stages in implementing an OPA, namely preparation, instructions, and evaluation. As for the observed constraints faced by the students were found to include poor quality of peer feedback, students' insufficient level of impartiality, and unclear assessment criteria provided by the teacher. The results of this study have several pedagogical implications for teachers and educational researchers. To make the OPA a worthwhile endeavor, teachers first should ensure that the majority of students have sufficiently understood the materials. Secondly, the teachers should also provide clear step-by-step instructions and comprehensible assessment criteria. Finally, the teachers should also make sure that the assessment is conducted in a single- or double-blinded fashion, so that none of the students will know who will assess their work and vice versa. This will improve the impartiality of the assessment and decrease the students' anxiety about their personal relationships with other classmates. It needs to be acknowledged that this study has limitations, which is evidenced in the methodologies the researchers used in crafting the questionnaire which was adopted. The questionnaire followed the blueprint from several previous studies, which were mostly negative, hence

the respondents were inclined to provide negative responses. Additionally, the research did not cover all the issues mentioned by the students. This research focused on the three most stated constraints. We suggest that future research should focus on constructing a questionnaire set as a benchmark in OPA-related studies.

References

- Abrams, Z. I. (2019). Collaborative writing and text quality in Google Docs. *Language Learning and Technology*, 23(2), 22–42.
- Afifi, S., Rahimi, M., & Wilson, J. (2023). Student engagement with teacher and automated written corrective feedback on L2 writing: A multiple case study. *JALT CALL Journal*, 19(2), 216–242.
<https://doi.org/10.29140/jaltcall.v19n2.1041>
- Alisha, F., Safitri, N., & Santoso, I. (2019). Students' difficulties in writing EFL. *PROJECT: Professional Journal of English Education* 2(1), 20–25.
- Anh, D. T. N. (2019). EFL student's writing skills: challenges and remedies. *IOSR Journal of Research & Method in Education*, 9(6), 74–84.
<https://doi.org/10.9790/7388-0906017484>
- Azarnoosh, M. (2013). Peer assessment in an EFL context: Attitudes and friendship bias. *Language Testing in Asia*, 3(1), 1–10.
<https://doi.org/10.1186/2229-0443-3-11>
- Belkhir, A., & Benyelles, R. (2017). Identifying EFL learners essay writing difficulties and sources: a move towards solution the case of second year EFL learners at Tlemcen University. *International Journal of Learning, Teaching and Educational Research*, 16(6), 80–88.
- Bamberger, P. A., Kimmel, M., & Oref-Chen, T. (2005). Peer assessment, individual performance, and contribution to group progress. *Group & Organization Management*, 30(4), 344–377.
<https://doi.org/10.1177/1059601104267619>
- Barnes, A. J. (2023). Online teacher written corrective feedback outside of class time: (In)effectiveness and task engagement. *Technology in Language Teaching & Learning*, 5(2), 37–58. <https://doi.org/10.29140/tltl.v5n2.911>
- Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). Pearson Longman.
- Brown, H. D., & Abeywickrama, P. (2010). *Language assessment: Principles and classroom practices*. Pearson Longman.
- Bryant, D. A., & Carless, D. R. (2010). Peer assessment in a test-dominated setting: Empowering, boring or facilitating examination preparation? *Educational Research for Policy and Practice*, 9(1), 3–15.
<https://doi.org/10.1007/s10671-009-9077-2>
- Cheng, W., & Warren, M. (2005). Peer assessment of language proficiency. *Language Testing*, 22(1), 93–121. <https://doi.org/10.1191/0265532205lt298oa>
- Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). SAGE Publications Inc.

- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications Inc.
- Chetcuti, D., & Cutajar, C. (2014). Implementing PA in a post-secondary (16–18) physics classroom. *International Journal of Science Education*, 36(18), 3101–3124. <https://doi.org/10.1080/09500693.2014.953621>
- De Grez, L., Valcke, M., & Roozen, I. (2012). How effective are self- and peer assessment of oral presentation skills compared with teachers' assessments? *Active Learning in Higher Education*, 13(2), 129–142. <https://doi.org/10.1177/1469787412441284>
- Dochy, F., Segers, M., & Sluijsmans, D. (1999). The use of self-, peer and co-assessment in higher education: A review. *Studies in Higher Education*, 24(3), 331–350. <https://doi.org/10.1080/03075079912331379935>
- Dörnyei, Z., & Griffee, D. T. (2010). Research methods in applied linguistics. *TESOL Journal*, 1(1), 181–183. <https://doi.org/10.5054/tj.2010.215611>
- Ene, E., & Upton, T. A. (2014). Learner uptake of teacher electronic feedback in ESL composition. *System*, 46(1), 80–95. <https://doi.org/10.1016/j.system.2014.07.011>
- Falchikov, N. (2001). *Learning together: Peer tutoring in higher education*. Routledge Falmer.
- Fatimah, F. & Masduqi, H. (2017). Research trends in EFL writing in Indonesia: Where art thou? *Journal of Teaching and Education*, 7(01), 89–98.
- Foley, S. (2013). Student views of peer assessment at the international school of Lausanne. *Journal of Research in International Education*, 12(3), 201–213. <https://doi.org/10.1177/1475240913509766>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (7th ed). McGraw-Hill.
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2012). *Educational research: Competencies for analysis and applications* (10th ed). Pearson Education, Inc.
- Geiser, S., & Studley, R. (2002). UC and the SAT: Predictive validity and differential impact of the SAT I and SAT II at the University of California. *Educational Assessment*, 8(1), 1–26. https://doi.org/10.1207/S15326977EA0801_01
- Gielen, S., Peeters, E., Dochy, F., Onghena, P., & Struyven, K. (2010). Improving the effectiveness of peer feedback for learning. *Learning and Instruction*, 20(4), 304–315. <https://doi.org/10.1016/j.learninstruc.2009.08.007>
- Harris, L. R., & Brown, G. T. L. (2013). Opportunities and obstacles to consider when using peer- and self -assessment to improve student learning: Case studies into teachers' implementation. *Teaching and Teacher Education*, 36(11), 101–111. <https://doi.org/10.1016/j.tate.2013.07.008>
- Hilman, F. A. (2017). *Corrective feedback and learner autonomy in writing*. [Master's thesis, Universitas Pendidikan Indonesia]. Repository <http://repository.upi.edu/30100/>

- Hsien, C. L. (2009). *A case study of how a large multilevel EFL writing class experiences and perceives multiple interaction activities*. [Doctoral dissertation, Southern Illinois University]. OpenSIUC <https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1079&context=dissertations>
- Husin, M. S., Nurbayani, E. (2017). The ability of Indonesian EFL learners in writing academic papers. *Dinamika Ilmu*, 17(2). <http://dx.doi.org/10.21093/di.v17i2.725>
- Ibnian, S. S. K. (2017). Writing difficulties encountered by Jordanian EFL learners. *Asian Journal of Humanities and Social Studies* 5(3), 197–206. Asian Online Journals <https://www.ajouronline.com/index.php/AJHSS/article/view/4785>
- Indasari, N. L., Purwati, O., & Anam, S. (2019). The impact of peer assessment on students' recount text. *Eternal (English, Teaching, Learning, and Research Journal)*, 5(2), 221–238. <https://doi.org/10.24252/Eternal.V52.2019.A4>
- Kaufman, J. H., & Schunn, C. D. (2011). Students' perceptions about peer assessment for writing: Their origin and impact on revision work. *Instructional Science*, 39(3), 387–406. <https://doi.org/10.1007/s11251-010-9133-6>
- Keong, C.Y., & Mussa, H. (2015). Academic writing difficulties of Iraqi postgraduate students in Malaysia. *International Journal Education and Research*, 3(6), 25–34. <https://www.ijern.com/journal/2015/June-2015/03.pdf>
- Klimova, B. F. (2014). Constraints and difficulties in the process of writing acquisition. *Procedia – Social and Behavioral Sciences*, 122, 433–437. <https://doi.org/10.1016/j.sbspro.2014.01.1367>
- Lin, S. S. J., Liu, E. Z. F., & Yuan, S. M. (2001). Web-based peer assessment: Feedback for students with various thinking-styles. *Journal of Computer Assisted Learning*, 17(4), 420–432. <https://doi.org/10.1046/j.0266-4909.2001.00198.x>
- Lindblom-ylänne, S., Pihlajamäki, H., & Kotkas, T. (2006). Self-, peer- and teacher-assessment of student essays. *Active Learning in Higher Education*, 7(1), 51–62. <https://doi.org/10.1177/1469787406061148>
- Liu, N. F., & Carless, D. (2006). Peer feedback: The learning element of peer assessment. *Teaching in Higher Education*, 11(3), 279–290. <https://doi.org/10.1080/13562510600680582>
- Lu, J., & Zhang, Z. (2012). Understanding the effectiveness of online peer assessment: A path model. *Journal of Educational Computing Research*, 46(3), 313–333. <https://doi.org/10.2190/EC.46.3.f>
- Ma'rufah, D. W., Muflihah, M., & Awaliyah, U. (2021). Need analysis on writing skill: What do the students really need for writing course? *Tarling Journal of Language Education*, 5(1). <https://doi.org/10.24090/tarling.v5i1.4984>
- McGarr, O., & Clifford, A. M. (2013). 'Just enough to make you take it seriously': Exploring students' attitudes towards peer assessment. *Higher Education*, 65(6), 677–693. <https://doi.org/10.1007/s10734-012-9570-z>

- Mualim, M., & Aziez, F. (2020). Reading portfolio as a supplementary activity to leverage students' reading competency. *Jurnal Basis*, 7(2), 245. <https://doi.org/10.33884/basisupb.v7i2.1850>
- Mualim, M., Ma'rufah, D. W., & Sartika, E. (2019, November). *The strengths and pitfalls of Google classroom application to Gen-Z students' learning hybridity*. Paper presented at International Conference on Islamic Education (ICIED), UIN Maulana Malik Ibrahim, Malang, Indonesia <http://conferences.uin-malang.ac.id/index.php/icied/article/view/1108>
- Noble, H., & Heale, R. (2019). Triangulation in research, with examples. *Evidence-Based Nursing*, 22, 67–68. <http://dx.doi.org/10.1136/ebnurs-2019-103145>
- O'Malley, J. M., & Pierce, L. V. (1996). *Authentic assessment for English language learners: Practical approaches for teachers*. Addison-Wesley Pub. Co.
- Rofiah, N. L., Aba Sha'ar, M. Y. M., & Waluyo, B. (2023). The efficacy of integrating Padlet-mediated feedback into writing lessons: A case of low-proficiency students. *The JALT CALL Journal*, 19(3), 317–343. <https://doi.org/10.29140/jaltcall.v19n3.1150>
- Rollinson, P. (2005). Using peer feedback in the ESL writing class. *ELT Journal*, 59(1), 23–30.
- Rosa, S. S., Coutinho, C. P., & Flores, M. A. (2016). Online peer assessment: Method and digital technologies. *Procedia – Social and Behavioral Sciences*, 228, 418–423. <https://doi.org/10.1016/j.sbspro.2016.07.064>
- Saito, H., & Fujita, T. (2004). Characteristics and user acceptance of peer rating in EFL writing classrooms. *Language Teaching Research*, 8(1), 31–54. <https://doi.org/10.1191/1362168804lr133oa>
- Sluijsmans, D. M. A., Brand-Gruwel, S., Van Merriënboer, J. J. G., & Martens, R. L. (2004). Training teachers in peer-assessment skills: Effects on performance and perceptions. *Innovations in Education and Teaching International*, 41(1), 59–78. <https://doi.org/10.1080/1470329032000172720>
- Spiller, D. (2012). *Assessment matters: Self-assessment and peer assessment*. Teaching Development University of Waikato. https://cei.hkust.edu.hk/files/public/assessment_matters_self-assessment_peer_assessment.pdf
- Supriyadi. (2015). Pengembangan model pembelajaran menulis karya ilmiah berpendekatan konstruktivisme. *Jurnal Litera*, 14(2), 361–375. <https://doi.org/10.21831/ltr.v14i2.7210>
- Topping, K. J., Smith, E. F., Swanson, I., & Elliot, A. (2000). Formative peer assessment of academic writing between postgraduate students. *Assessment & Evaluation in Higher Education*, 25(2), 149–169. <https://doi.org/10.1080/713611428>
- Tsai, C. C. (2009). Internet-based peer assessment in high school settings. In L. Tan Wee Hin & R. Subramaniam (Eds.), *Handbook of research on new media literacy at the k-12 level: Issues and challenges* (Vol. 2, pp. 743–754). <https://doi.org/10.4018/978-1-60566-120-9.ch046>



- Tseng, S. C., & Tsai, C. C. (2007). On-line peer assessment and the role of the peer feedback: A study of high school computer course. *Computers & Education*, 49, 1161–1174. <http://dx.doi.org/10.1016/j.compedu.2006.01.007>
- White, E. (2009). Student perspectives of peer assessment for learning in a public speaking course. *Asian EFL Journal*, 33(1), 1–36.
- White, K., & Hall, A. H. (2014). *Examining teachers' perceptions of effective writing strategies and barriers to implementation*. Tiger Prints.
- Yang, Y. F. (2011). A reciprocal peer review system to support college students' writing: A reciprocal peer review system. *British Journal of Educational Technology*, 42(4), 687–700. <https://doi.org/10.1111/j.1467-8535.2010.01059.x>
- Zaini, A., & Mazdayasna, G. (2015). The impact of computer-based instruction on the development of EFL learners' writing skills. *Journal of Computer Assisted Learning*, 31(6), 516–528. <https://doi.org/10.1111/jcal.12100>