

## The effect of web-based peer feedback on students' writing achievement

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### Highlights

- Using web-based peer feedback can be more effective in increasing students' L2 writing achievement than traditional teacher corrective feedback.
- Since they are convenient, allow continual learning, and boost motivation, web-based platforms may be beneficial in the language learning process.
- Some downsides of utilizing web-based platforms include the quality of provided feedback, a lack of technological equipment, and network connectivity problems.

### Abstract

Peer feedback via CMC modalities has become an alternative to conventional in-class peer feedback due to the rapid rise of educational technology and the widespread use of computer-mediated communication in L2 education. Despite the fact that much research has been published on the benefits of CMC tools for enhancing L2 proficiency, the number of studies on peer feedback provided on online platforms and its effect on L2 writing achievement is limited. Therefore, the current research, with the participation of 42 university preparatory class engineering students, aimed to investigate the effectiveness of web-based peer feedback on L2 writing achievement and their views towards web-based peer feedback. For this study, the purposive sampling method was employed. To collect the data, pre-and post-tests were used and semi-structured interviews were conducted with the experimental group members. The findings have indicated that compared to traditional teacher feedback, web-based peer feedback is found to be more effective in improving students' L2 writing achievement. Regarding the views of participants, web-based platforms to give feedback has several advantages, including practicality, ease of access, motivation, and continuous learning. The quality of the input, a lack of technological resources, or connectivity problems were regarded as the disadvantages.

**Article Info:** Research Article

**Keywords:** *web-based feedback, peer feedback, web-based peer feedback*

### 1. Introduction

During the last several decades, there has been a significant shift from an explicit focus on the language elements (i.e., grammar, vocabulary) to an emphasis on the expression and understanding of meaning by means of the target language. This shift has resulted in a higher tolerance for mistakes in learners' speaking and a focus on providing chances for them to utilize the target language in more real and natural settings (Lightbown & Spada, 1990). Errors of learners, in this process, seemed to have the potential of providing the necessary information on how far toward the goal the learner has advanced and what he or she still needs to learn (Corder, 1982). The matter of whether teachers should respond to learners' errors, the timing

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for correcting them, and the types of errors that should be corrected has sparked numerous discussions. In this sense, Dulay and Burt (1974) claimed that the errors of learners in the L2 process do not indicate improper learning or the need for instructional assistance. However, according to Hendrickson (1978), correcting language learners' errors by providing feedback improves their L2 competency more than leaving the faults untreated.

The impact of feedback given to students throughout the teaching and learning process has been the subject of a lot of attention in the field of Second Language Acquisition (SLA) during the last several decades (Lyster et al., 1997, 2013; Sheen & Ellis, 2011). The term feedback, in the field of L2 education, refers to 'reactions to incorrect learner utterances' (Ellis, 2006). Even though the language instructor is often expected to provide feedback to learners during the language learning process, peer feedback and its effects on improving learners' language proficiency have been the subject of several studies in recent years (Yu & Lee, 2016). Liu and Edwards (2018) define peer feedback as the utilization of learners themselves as sources of information and interaction, enabling them to take on the roles and responsibilities typically fulfilled by formally trained instructors, tutors, or editors. This involves the interpretation and critique of each other's drafts in written and oral formats throughout the writing process. The use of peer feedback exercises in ESL and L2 writing classrooms has usually been supported by research and practice conducted in this field, although many instructors (and the majority of L2 learners) are not entirely convinced of its value in their own unique circumstances (Rollinson, 2005).

Technological developments in recent years have led to the development of computer-mediated communication tools and the use of these tools in L2 learning settings (Felix, 2003). In this sense, asynchronous (email, threaded discussion boards, wikis, and blogs) and synchronous (IM, Smart Phones, IM, and SMS Text Messaging, Multiple User Text Chats, Chat rooms) CMC (Computer-Mediated Communication) technologies began to be integrated into the L2 learning process (Lafford & Lafford, 2005).

A substantial body of research has emerged concerning the advantages of CMC tools in enhancing second language (L2) proficiency, particularly within the realm of L2 learners' writing skills (Lai & Li, 2011; Ma, 2020; Zheng & Warschauer, 2017), as well as on the attitudes of students and teachers toward using CMC (Meskill & Anthony, 2007). Likewise, over the past two decades, there has been significant growth in research investigating feedback sources' impact on second language writing (Cao et al., 2022; Latifi et al., 2021).

Despite this growing body of research, exploration of peer feedback provided on online (web-based) platforms and its impact on L2 learners' writing achievement and attitudes remains limited (Blake, 2011; Lam, 2021; Pham, 2022; Zhang et al., 2022). To simplify, there is still a significant lack of understanding about how peer feedback on online platforms affects learners' writing skills, their interaction with different

feedback sources, and the factors influencing their decisions to gradually incorporate feedback within online writing contexts over time (Tian & Zhou, 2020).

Therefore, the current research aims to investigate the effect of using web-based platforms to provide peer feedback in L2 writing courses to improve learners' process writing performance, as well as to explore the views of learners regarding the use of web-based platforms in this process, by addressing the following research questions:

- (1) What is the effect of web-based peer feedback on learners' writing achievement?
- (2) What are the views of the learners in the experimental group regarding web-based peer feedback?

## **2. Literature**

### *2.1. Peer Feedback*

Peer feedback, commonly referred to as 'peer review, peer response, or peer editing,' is a collaborative activity where students evaluate and provide feedback on each other's written work in small groups (Zhu, 2001). Peer feedback is a procedure whereby students collaborate to give feedback on one another's writing throughout numerous revisions in both oral and written media (Liu & Edwards, 2018). The purpose of peer response is for students to provide comments on their first manuscripts to other students for the student writers have a broader sense of audience and work on improving their writings (Nelson & Murphy, 1993). The conceptual basis for peer assessment and peer feedback is that it allows students to actively manage their learning. It is a self-regulated learning component in which students monitor their work through feedback from external sources, such as the contributions of their peers (Butler & Winne, 1995).

The evaluation of students' written work was traditionally viewed as the teacher's responsibility in the foreign language classroom. Even when the process-oriented approaches to writing instruction were introduced, and students were accustomed to responding to their peers' work through various checklists or heuristics provided to them to assist in the feedback-giving process, the role of the teacher remained the same and seemed the only reader with grading authority (Rothschild & Klingenberg, 1990).

According to Davies and Omberg (1987), the benefits of peer feedback include learning from others' work, having more time to discuss or explain mistakes, helping to create new ideas, raising self-confidence and motivation, and obtaining new awareness to produce good writing. For most students, peer review is a beneficial technique because it provides social contact, the opportunity to speak the target language, formulate and share new ideas and it allows learning from others, helps in developing new perspectives, and improves organization and writing style (Mangelsdorf, 1992).

Peer feedback has several drawbacks, including a lack of experience, inaccurate corrections, and a concern about hurting each other's feelings (Davies & Omberg, 1987). According to Cho and Schunn (2007), the drawbacks that peer evaluations have include a lack of accuracy, learners' lack of subject-matter knowledge, the quality of feedback provided to peers, being critical rather than constructive, and a lack of anonymity.

## 2.2. *Online Peer Feedback*

Due to the rapid progress of educational technology and the prevalent utilization of computer-mediated communication (CMC) in language education, peer feedback through CMC modalities has emerged as a substitute for in-person peer feedback (Yu & Lee, 2016).

To encourage peer feedback during the language learning and teaching process, many online learning environments, which allow learners to submit their assignments and provide feedback on their peers' works reciprocally and anonymously without regard for time or space constraints, have been designed (Latifi et al., 2021).

Asynchronous and synchronous feedback modalities can be utilized to promote learners' engagement in peer feedback on writing throughout the feedback-giving process. Chang (2009) investigated EFL learners' involvement rates in peer review activities as well as students' perspectives of peer review using synchronous and asynchronous computer-mediated communication modalities in a study. The findings demonstrated that peer review via both modes, which differ from face-to-face modes in their distinct time- and space-independent aspects, resulted in students' high involvement and similar commenting styles.

The use of online platforms in the peer feedback-giving process has various advantages. For example, online platforms can provide practicality and simplicity of access to feedback. Additionally, they can enhance motivation and provide permanent learning (Al-Darei & Ahmed, 2022; Lee, 2012). According to Jones et al. (2006), online peer feedback allows students to provide feedback that focuses on global concerns in writing such as content and process as opposed to traditional peer evaluation where students focus on textual issues such as grammar, vocabulary, and style. Another benefit of online peer feedback is that it can provide a less intimidating environment than traditional face-to-face feedback sessions, resulting in increased student participation (Guardado & Shi, 2007).

There have been multiple previous attempts to investigate the effect of web-based peer feedback on students' language proficiency and motivation. In this regard, Braine (1997) examined ESL students' writing in first-year English classrooms in two settings: a networked computer class and a typical lecture-style class to see which environment encouraged better writing and more writing improvement. The results showed that even though the traditional setting was shown to promote more improvement in writing, in networked classes, the length of comments was greater than in traditional classrooms, resulting in a significant reduction in overall instructor time spent on providing feedback in online classrooms compared to traditional classrooms.

In their study, Sullivan and Pratt (1996) compared students' views in two ESL writing environments: a networked computer-assisted classroom and a traditional classroom. The study's findings have revealed that writing quality improved in the computer-assisted classroom, and students in the computer-assisted classroom had much more positive views and showed higher participation than students in the traditional classroom.

In a similar study, Liu and Sadler (2003) compared traditional peer feedback to web-based peer feedback in terms of effectiveness, concluding that while participants appeared eager to provide feedback to their peers via online platforms and considered such platforms quite appealing, face-to-face communication, however, was found to be more effective than web-based communication due to the nonverbal communication feature that is essential in intercultural communication.

In their study, Guardado and Shi (2007) aimed to investigate ESL students' experiences with online peer feedback. The results of their study have indicated that even though anonymity in online peer feedback helped ESL students voice their opinions, it needs to be organized carefully to maximize its positive effect and the instructors should join follow-up discussions after such online peer feedback sessions.

Liu and Sadler (2003) compared the effect of peer review in electronic versus traditional modes on second language (L2) writing and found that electronic peer review was more effective in improving students' writing quality. Similarly, Cho and Schunn (2007) showed that web-based reciprocal peer review could enhance students' writing skills.

In Qing Ma's (2020) research, the role of inter-group peer online feedback in an English for Academic Purposes (EAP) context was examined. Over 1000 peer comments were analyzed alongside teacher feedback on final writings. Peer critical comments effectively predicted final scores and emphasized content over language form in EAP settings. The study highlighted the friendly and supportive tone of peer feedback, showcasing its significant contribution to EAP writing improvement and the necessity of thoughtfully designed wiki learning environments.

Awada and Diab (2021) investigated the effectiveness of two peer review methods for enhancing argumentative writing in English as a foreign language (EFL) university learners. They compared face-to-face oral peer review (FTFPR) with online written peer review (OLPR) in an experimental setup, with OLPR outperforming FTFPR. The OLPR group provided more systematic feedback, addressing content, organization, and language, thereby recommending the use of OLPR in argumentative writing classes.

Latifi et al. (2021a) investigated the effects of different types of support for peer feedback on students' peer learning processes, argumentative essay quality, and domain-specific learning. Using an online peer feedback platform called EduTech, they had 86 BSc students write argumentative essays, engage in peer learning, and revise their work. Results revealed that students who received online feedback outperformed the control group in peer learning, essay quality, and domain-specific learning.

In their study, Zhang et al. (2022) explored second language learners' perceptions of utilizing multiple online platforms for peer feedback in an academic writing course. The research revealed learners' perceived advantages and drawbacks of online peer feedback and showcased the potential of combining diverse platforms to magnify their benefits for academic writing. The findings also underscored the role of emotional factors, such as the use of emojis and memes, in fostering positive student emotions during the feedback process (Zhang et al., 2022).

### **3. Methodology**

#### *3.1. Research Model/Design*

To date, various methods have been developed and introduced to measure the impact of peer feedback on student achievement. This study uses an explanatory-sequential mixed methods research design to comprehensively investigate the effect of peer feedback on students' writing success. According to Creswell (2002), the explanatory-sequential mixed technique entails an initial quantitative phase for discovering patterns, followed by qualitative data collecting to give deeper insights, hence increasing overall comprehension.

The current study is grounded on Vygotsky's (1978) socio-cultural theory, which emphasizes the importance of social interaction as a source of learning, and a cognitive process theory of writing (Hayes & Flower, 1980). The process writing theory emphasizes the process above the product, viewing writing as a dynamic process in which students enhance their works through feedback and text modifications (Hayes & Flower, 1980; Hayes, 2012).

#### *3.2. Research Context*

The present study was carried out with the participation of 42 university preparatory class engineering students, 22 of whom were in the experimental group (f=2, m=20), and 20 in the control group (f=6, m=14), are the recipients of a year-long English education at a state university in Alanya, Turkey. The participants both in the experimental and control group have the same language proficiency level (Intermediate Plus B1+) and have been receiving a total of 25 hours of weekly instructions, including 15 hours of the main course and 10 hours of an academic writing course.

Within the scope of the study, the purposive sampling method was adopted to choose the participants of the study. This sampling method is a non-probability approach that involves selecting individuals based on specific criteria related to the research question. Purposive sampling is commonly used in qualitative research to select participants with particular experiences, characteristics, or knowledge that can assist in achieving the research objectives. It is also known as selective or judgmental sampling (Palinkas et al., 2015).

#### *3.3. Procedure*

In order to investigate the effectiveness of web-based peer feedback on L2 writing achievement, having created an experimental group and a control group, a three-week-long academic writing course syllabus in which students work on different essay types each week has been prepared. Before the implementation of the program, to evaluate the level of students' achievement, a short paragraph essay task in which students were asked to write about the differences between online and traditional classrooms was given to both the control and experimental group as a pre-test. After 40 minutes of task completion time, the assignments of the participants were collected and then graded using the academic writing scoring rubric prepared by L.

Hamp-Lyons in 1992 by three different instructors working in the same institution. After implementing the pre-test, a classroom on an online platform called “Edmodo” was created for the experimental group. Students were asked to enroll on this web platform, post each week’s assignments, and comment on others’ work. In the first week, the topic “comparison and contrast essay” was covered, and participants were asked to write an essay about two places they have visited before and post them on Edmodo. After they have posted their assignments, students were divided into five groups and asked to comment on their group members’ writings on the platform. In the second week, the topic, “opinion essay” was covered and students are given an essay task in which they are supposed to write about the effect of technology on people’s lives. Again, the students were asked to post their works on the platform and comment on their group members’ work. In the third week, the topic “cause and effect essay” was covered, and a task in which students were asked to write about how people change was assigned, post them on the platform, and comment on others’ work. During this process, the control group, on the other hand, only received traditional teacher feedback for their writing. Having completed the three-week-long program, students in both the control and experimental group were given a post-test in which they were asked to write an opinion essay on the effects of spending too much time on social networks, and they have given 40 minutes to complete the task. The assignments of the students were graded using the same academic writing scoring rubric by three different teachers working in the same institution, and the pre and post-test results of the students were compared to see if there is a significant difference between the experimental and control groups. To investigate the views of students in the experimental group about the effectiveness of web-based peer feedback, on the other hand, semi-structured interviews with the participation of seven students in the experimental group were performed.

### *3.4. Data Collection Tools*

#### *3.4.1. Pre-test*

As a pre-test, students in both experimental and control groups were assigned a short essay task, requiring them to explore differences between online and traditional classrooms. This task aimed to assess students’ writing achievement levels. The essay question’s design was deliberately harmonized with the semester’s subject matter, bolstering its validity. This alignment with course objectives secured content validity, while the direct correlation to the subject matter ensured construct validity. The question’s specific structure, tailored to encourage advanced cognitive engagement, was coupled with a pilot study and expert feedback, further enhancing its overall validity. Each student was given 40 minutes to complete the writing task, and they were not permitted to get any help in this process. The academic writing score rubric, developed by L. Hamp-Lyons in 1992, which has seven components including task completion/format/layout, topic development, organization, vocabulary, discourse control, sentence structure, and mechanics, was used to evaluate the submitted assignment. Three different language instructors working in the same institution

were requested to grade the assignment of each student and the mean score for each assignment was calculated.

#### *3.4.2. Post-test*

An opinion essay task in which students were asked to write about the effects of spending too much time on social networks was assigned as a post-test to investigate the effectiveness of the web-based peer feedback on the writing achievement level of students. The essay question employed in the post-test was also tailored to align with the course objectives, further reinforcing its validity. Just as before, this alignment enhanced content validity and ensured construct validity through its direct relevance to the subject matter. A pilot study was carried out, and expert opinion was also sought to refine the essay question's design. Each student was given 40 minutes to complete the writing task, and they were not permitted to get any help in this process. The same academic writing score rubric was again used to evaluate the submitted assignment and three different language instructors working in the same institution were requested to grade the assignment of each student and the mean score for each assignment was calculated.

#### *3.4.3. Interview*

To investigate the effectiveness of web-based peer feedback, semi-structured interviews with the participation of students in the experimental group were conducted by the researcher. A semi-structured interview is a form of verbal conversation where a researcher utilizes questions to gather information from another person. While the interviewer prepares a set of predetermined questions, semi-structured interviews are conducted in a flexible manner, allowing participants to delve into topics that hold importance to them (Longhurst, 2003). The semi-structured interview incorporates a combination of closed and open-ended questions, often accompanied by "why" or "how" inquiries. Unlike a structured interview that strictly adheres to predetermined questions, this type of conversation allows for exploration of the designated topics and may venture into unexpected issues (Adams, 2015).

The semi-structured interview questions in this study were meticulously crafted by the researcher to align with research goals and context. Expert input further refined them, and a pilot study was conducted to address potential misunderstandings.

#### *3.5. Data Analysis*

An independent samples t-test was performed using SPSS version 22.0 to compare the pre-and post-test findings between the control and experimental groups. The normality assumption was verified for both groups before the t-test using the Shapiro-Wilk test, and the findings revealed that both groups were normally distributed ( $p > .05$ ). As a result, parametric tests were used to compare the means of the two groups.

The data in the qualitative data section was analyzed using content analysis. The information was transcribed verbatim and classified into predetermined categories. The categories were created in response to the study questions and objectives. Two independent coders engaged in the coding process.

### 3.6. Findings

#### 3.6.1. Quantitative Data Analysis Results

RQ1: What is the effect of web-based peer feedback on students' writing achievement?

After a short paragraph essay task administered as a pre-test within the scope of the current study was scored by three different instructors, the average score of each group is listed in the following section.

**Table 1.**

Pre-test results of the groups

	Group	N	X	SD	SEM
Pre-test	Experimental	22	76,27	8,86	1,89
	Control	20	74,20	12,98	2,90

Based on the students' pre-test results, the test of normality was performed to select the most appropriate statistical test to be used in the data analysis process. The Shapiro-Wilk test was therefore used as the criterion, and the findings of the test did not show any non-normality between the experimental group's pre-test results,  $W(22) = 0.94$ ,  $p = 0.19$ , and the control group's pre-test results,  $W(20) = 0.96$ ,  $p = 0.55$ . The overall pre-test results of the groups were found to be likewise normal,  $W(42) = 0.97$ ,  $p = 0.33.5$ . In this sense, parametrical tests were employed in the data analysis process.

**Table 2.**

Independent samples t-test results for the pre-test scores of the groups

Group	N	X	S.D.	df	t	p*
Experimental	22	76,57	8,86	40	.609	.546
Control	20	74,20	12,98			

The pre-test scores of students in the control and experimental groups were compared using an independent-sample t-test, and no significant difference was found between the pre-test scores of each group;  $t(40) = 0.60$ ,  $p = 0.54$ . In this regard, the data set was confirmed to be normally distributed, with no significant differences in the pre-test scores of the students.

Having completed a three-week academic writing course program, each student in both groups was given a post-test to compare the results and assess the impact of traditional teacher corrective feedback and web-based peer feedback process on students' writing achievement. The following table includes the post-test results of the experimental and control group.

**Table 3.**

Post-test results of the groups

	Group	N	X	SD	SEM
Post-test	Experimental	22	87,04	8,78	1,87
	Control	20	77,05	13,80	3,08

The post-test findings have shown that the mean score of both groups has increased when compared to the pre-test results. To investigate whether there was a significant difference between the score of pre and post-test results, a paired-sample t-test was performed for both the control and experimental group respectively.

**Table 4.**

Independent samples t-test results for the pre-and post-test scores of the experimental group

Group	Test	N	X	S.D.	df	t	p*
Experimental	Pre-test	22	76,27	8,86	21	-12.00	.00
	Post-test	22	87,04	8,78			

The pre and post-test scores of the experimental group were compared to investigate the effect of web-based peer feedback on students' writing achievement. The findings of both tests have shown that the improvement of students in writing was statistically significant,  $t(21) = 12.00$ ,  $p = .00$ .

**Table 5.**

Independent samples t-test results for the pre-and post-test scores of the control group

Group	Test	N	X	S.D.	df	t	p*
Control	Pre-test	20	74,20	12,98	19	-1.99	.06
	Post-test	20	77,05	13,80			

The pre and post-test scores of the control group were compared to investigate the effect of traditional teacher corrective feedback on students' writing achievement. The findings of both tests, on the other hand, have shown that the improvement of students in writing was statistically not significant,  $t(19) = 1.99$ ,  $p = .06$ .

Having compared each group's pre and post-test results separately, an independent samples t-test was performed to compare the scores of the post-test of the control and the experimental group to see which type of feedback was effective in improving students' writing achievement.

**Table 6.**

Independent samples t-test results for the post-test scores of the groups

Group	N	X	S.D.	df	t	p*
Experimental	22	87,04	8,78	40	2.82	.007
Control	20	77,05	13,80			

An independent samples t-test results have shown that there was a significant difference in the post-test scores of the students, indicating that the students in the experimental group ( $M=87.04$ ,  $SD=8,78$ ),

outperformed the control group ( $M=77.05$ ,  $SD=13.80$ ). In this regard, it can be concluded that web-based peer feedback, compared to traditional teacher corrective feedback is more effective in improving students' writing achievement.

### 3.6.2. Qualitative Data Analysis Results

RQ2: What are the views of the students in the experimental group regarding web-based peer feedback?

**Table 7.**

Content analysis results

Categories/Themes	Codes	Frequency
The advantages of web-based peer feedback	learn	7 (S1, S2, S6)
	improve	3 (S1, S6, S7)
	access	3 (S2, S3, S5)
	effective	2 (S1, S3)
	easy	2 (S1, S6)
	advantageous	2 (S3, S5)
	motivation	2 (S2, S4)
	permanent learning	2 (S3, S5)
	encourage	1 (S4)
	positive effect	1 (S3)
The disadvantages of web-based peer feedback	technological problem	2 (S2, S4)
	unnecessary comments	1 (S1)
	inaccurate	1 (S2)
	complicated	1 (S2)
	quality	1 (S4)
	accuracy	1 (S4)
	extra workload	1 (S7)
	confusing	1 (S6)
misleading	1 (S5)	

#### *The advantages of web-based peer feedback*

In the web-based peer feedback process, the participant students stated that they learned many things including new vocabulary, grammatical forms, and academic writing structures through the feedback they received from their friends.

*The feedback I provided using different sentence structures encouraged my classmates to come and ask questions to me, thus enabling them to learn such structures. (S1)*

*Learning different words contributed to my learning and It was also very useful in terms of improving my grammar and vocabulary. (S2)*

*Receiving feedback during this process allowed me to learn different words and academic sentence structures. (S6)*

The participants giving and receiving web-based peer feedback claimed that the process has boosted their writing and reading skills.

*Seeing my friends' mistakes made me make fewer mistakes, and reading their written works improved my reading skills in this process. (S1)*

*Receiving feedback during this process [...] improved my writing skills. (S6)*

*Reading other people's writings also indirectly improved my reading skills and made me feel more motivated to write. (S7)*

The accessibility of the online platform used to provide peer feedback is one of the advantages for participants.

*The online platform was very convenient for us because we were able to access our classmates' writings anytime we wanted. (S2)*

*Thanks to the online platforms that we used in this process, we were able to access the received feedback over and over again. (S3)*

*Being able to read and access what my friends wrote at any time has led to permanent learning. (S5)*

The entire feedback-giving procedure on the online platform was deemed extremely effective by some of the participants.

*Because we could understand each other, we were able to make more constructive remarks, affecting our writing skills positively. (S1)*

*The feedback we received from our friends was more effective in understanding the cause of mistakes we have made before. (S3)*

The participants considered the process of providing peer feedback via an online platform to be extremely simple.

*I agree that having comments to our friends via an internet platform was quite simple. (S1)*

*The platform that was used throughout the whole process was very practical and easy to use (S6)*

For several participants, integrating online platforms into the feedback-providing process was quite advantageous because it seemed time-saving and did not require physical materials such as pens or paper.

*The online platform that we used in this process was very advantageous because there was a fast feedback process. (S3)*

*For me, the online platform (Edmodo) was extremely advantageous. Sharing things on the platform from anywhere saved us a lot of time. Another advantage was the ability to easily correct what was written without the need for a pen and paper. (S5)*

Some participants' motivation has been shown to improve as a result of the peer feedback process using online platforms.

*My motivation increased considerably during this process. (S2)*

*Using an online platform encouraged me to write more and increased my motivation in this process.*

*(S4)*

*Reading other people's writings [...] made me feel more motivated to write. (S7)*

For some participants, unlike traditional teacher feedback, commenting on their peers' works led to permanent learning.

*The feedback we received from our friends was more effective in understanding the cause of mistakes we have made before and this practice led to permanent learning. (S3)*

*Being able to read and access what my friends wrote at any time provided permanent learning. (S5)*

In this process, some of the participants have said to be encouraged to give feedback using such platforms.

*Commenting on my peers' work via an online platform encouraged me to write more. (S4)*

For some, giving and receiving feedback in this way had a positive effect on their writing skills.

*My friends' comments and their feedback had a positive effect on my writing skills. (S3)*

*Seeing the language structures, and vocabulary choices of my friends positively affected my writing skills. (S3)*

*The disadvantages of web-based peer feedback*

The most potential disadvantage of the web-based peer feedback procedure for some participants is the technological equipment or connection problems that students may encounter during this process.

*Sometimes I did not have an internet connection or I had technological problems when there was a computer problem. (S2)*

*The lack of technological equipment or technological problems may be a disadvantage in this process. (S4)*

For some participants, the feedback-giving process was not given due attention by some peers as they underestimated the activity.

*Because of sincerity, my friends could sometimes make unnecessary comments. (S1)*

During the process, some participant students complained about the inaccurate or complicated feedback received from their peers.

*Sometimes our friends wrote inaccurate and complicated comments. (S2)*

For some participants, the quality or the accuracy of the feedback given or received was not at the desired level.

*I just sometimes doubted the quality or accuracy of the feedback given to me. (S4)*

In the feedback-giving process, some participants seemed not satisfied with the workload on them.

*Reading my friends' writings and giving them feedback created an extra workload for me. (S7)*

The participants also complained that the feedback they received was sometimes either too misleading or confusing.

*During the feedback-giving process, my friends sometimes made confusing comments. (S6)*

*The feedback that my friends gave to me was sometimes misleading. (S5)*

#### **4. Conclusion and Discussion**

The present study aimed to investigate the impact of web-based peer feedback on learners' L2 writing achievement and the views of learners in the experimental group regarding this feedback approach. In order to assess the effectiveness of web-based peer feedback, an experimental group and a control group were created within a three-week academic writing course. Both groups engaged in writing tasks and were assessed using pre-test and post-test essays aligned with the course content. The experimental group utilized an online platform "Edmodo" for web-based peer feedback, while the control group received traditional teacher feedback.

Quantitative analysis revealed that students in the experimental group significantly improved their L2 writing achievement compared to the control group, with the post-test scores indicating significant enhancement in the experimental group, thereby demonstrating the effectiveness of web-based peer feedback. In contrast, the control group's improvement was statistically not significant, affirming the superior impact of web-based peer feedback.

Qualitative analysis of students' views on web-based peer feedback uncovered several advantages. Participants highlighted learning new vocabulary, grammar, and writing structures through peers' feedback. The accessibility of the online platform facilitated the process, and the feedback exchange contributed to enhanced writing and reading skills. Online feedback provision was found to be simple and time-saving, increasing motivation for some students. However, certain disadvantages were also identified. Technological equipment issues and inconsistent feedback quality were cited as challenges. Some participants felt that their peers underestimated the feedback process, leading to inconsistent engagement. Issues with accuracy and workload dissatisfaction were also raised, while some participants found received feedback misleading or confusing.

Building upon these findings, this study contributes to the existing body of literature by investigating the impact of web-based peer feedback on students' writing achievement and their perceptions of online platforms in the peer feedback process. The findings align with previous research suggesting that web-based peer feedback can be more effective in enhancing students' writing skills compared to traditional teacher feedback (Awada & Diab, 2021; Latifi et al., 2021a; Liu & Sadler, 2003; Ma, 2020). Additionally, the study supports Zong et al.'s (2021) insight into the significance of student perceptions when evaluating comments provided during online peer feedback. Their research highlights students' ability to assess comment usefulness, extending beyond identifying brief comments as unproductive. This underscores the value of involving students in evaluating comment quality to enrich their learning experiences and integrate their perspectives into the feedback process.

Furthermore, the study reinforces previous research identifying the advantages of employing online platforms in the peer feedback process, including practicality, ease of access, enhanced motivation, and lasting learning benefits (Bitchener & Knoch, 2009; Cho & Schunn, 2007; Lee, 2012; Nicol & Macfarlane-Dick, 2006; Zhang et al., 2022). Nevertheless, the study also acknowledges the drawbacks associated with web-based peer feedback, encompassing concerns about feedback quality, access to necessary technological equipment, and connectivity issues. These findings align with prior research that has recognized similar limitations in online peer feedback (Jonas et al., 2006; Sullivan & Pratt, 1996). Additionally, the current research is consistent with the findings of Zhang et al. (2022), who shed light on the challenges linked to emotional burden and a decrease in peer trust within the context of web-based peer feedback. These insights underscore the necessity of addressing potential drawbacks and challenges associated with web-based peer feedback approaches.

In conclusion, this investigation reinforces the established importance of promoting learner engagement in feedback processes and integrating technology into education to enhance students' writing skills (Cho & Schunn, 2007; Lee, 2012; Nicol & Macfarlane-Dick, 2006). The results affirm the potential effectiveness of web-based peer feedback in improving students' writing achievements and refining their perceptions of online peer feedback. However, addressing the identified limitations, such as feedback quality and technological challenges, requires further research. Future studies should focus on strategies to enhance the quality and effectiveness of web-based peer feedback, offering actionable insights for educators and researchers.

#### *4.1. Limitations and Suggestions*

The study's objective was to assess the effectiveness of web-based peer feedback compared to traditional teacher feedback. While the findings uncovered multiple benefits associated with online platforms in the peer feedback process, the study's limitations merit acknowledgment. Variations in education systems and individual participant differences could potentially limit the applicability of the findings to diverse educational settings. A broader and more diverse sample could provide a more comprehensive understanding of web-based peer feedback's effectiveness, mitigating potential biases. Furthermore, the research primarily concentrated on short-term effects, urging exploration of the long-term impact of web-based peer feedback on students' writing skills and perceptions.

To advance the field, recommendations for future research include exploring web-based peer feedback in various educational contexts, encompassing age groups, language proficiency levels, and cultural backgrounds. Longitudinal studies could shed light on the sustained effectiveness of web-based peer feedback over time. Investigating technological factors' influence, such as online platform choices and internet connectivity quality, remains important. Strategies for improving web-based peer feedback quality, such as clear guidelines and student training programs, warrant exploration. Additionally, comparative

studies across multiple different academic disciplines can provide insights into variations in benefits and challenges.

Examining teacher training programs' impact on integrating web-based peer feedback into the curriculum, considering cultural factors that influence students' perceptions, and addressing accessibility challenges are essential research areas. Integrating learning analytics tools into web-based peer feedback systems to enhance feedback quality and exploring motivational aspects, including gamification and reward systems, can enhance student engagement and motivation. Lastly, cross-cultural studies that compare students' experiences of web-based peer feedback among diverse cultural backgrounds should be conducted to accommodate cultural nuances. These considerations will contribute to a deeper understanding of web-based peer feedback's effectiveness and facilitate improvements in feedback practices in education.

## References

- Adams, W. C. (2015). Conducting semi-structured interviews. In K.E. Newcomer, H.P. Hatry, J.S. Wholey (Eds.), *Handbook of practical program evaluation*, (4th ed., pp. 492-505). Wiley.
- Al-Darei, I. S. & Ahmed, A. M. (2022). The effect of feedback type in the e-learning environment on students' achievement and motivation. *Journal of Educational Technology & Online Learning*, 5(3), 694-705.
- Awada, G. M., & Diab, N. M. (2021). Effect of online peer review versus face-to-Face peer review on argumentative writing achievement of EFL learners. *Computer Assisted Language Learning*, 1-19.
- Bitchener, J., & Knoch, U. (2009). The value of a focused approach to written corrective feedback. *ELT Journal*, 63(3), 204-211.
- Blake, R. J. (2011). Current trends in online language learning. *Annual Review of Applied Linguistics*, 31, 19-35.
- Braine, G. (1997). Beyond word processing: Networked computers in ESL writing classes. *Computers and Composition*, 14(1), 45-58.
- Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65(3), 245-281.
- Cao, S., Zhou, S., Luo, Y., Wang, T., Zhou, T., & Xu, Y. (2022). A review of the ESL/EFL learners' gains from online peer feedback on English writing. *Frontiers in Psychology*, 13, 1035803.
- Chang, C. F. (2009). Peer review through synchronous and asynchronous CMC modes: A case study in a Taiwanese college English writing course. *The JALTCALL Journal*, 5(1), 45-64.
- Cho, K., & Schunn, C. D. (2007). Scaffolded writing and rewriting in the discipline: A web-based reciprocal peer review system. *Computers & Education*, 48(3), 409-426.
- Corder, S. P. (1982). *Error analysis and interlanguage*. Oxford University Press.

- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative* (Vol. 7). Prentice-Hall.
- Davies, N. F., & Omberg, M. (1987). Peer group teaching and the composition class. *System*, 15(3), 313-323.
- Dulay, H. C., & Burt, M. K. (1974). Errors and strategies in child second language acquisition. *TESOL Quarterly*, 129-136.
- Ellis, R. (2006). Researching the effects of form-focussed instruction on L2 acquisition. *AILA Review*, 19(1), 18-41.
- Felix, U. (2003). *Language learning online: Towards best practice* (Vol. 3). CRC Press.
- Guardado, M., & Shi, L. (2007). ESL students' experiences of online peer feedback. *Computers and Composition*, 24(4), 443-461.
- Hayes, J. R. (2012). Modeling and remodeling writing. *Written Communication*, 29(3), 369-388.
- Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3-30). Erlbaum.
- Hendrickson, J. M. (1978). Error correction in foreign language teaching: Recent theory, research, and practice. *The Modern Language Journal*, 62(8), 387-398.
- Jones, R. H., Garralda, A., Li, D. C., & Lock, G. (2006). Interactional dynamics in online and face-to-face peer-tutoring sessions for second language writers. *Journal of Second Language Writing*, 15(1), 1-23.
- Lafford, P. A., & Lafford, B. A. (2005). CMC technologies for teaching foreign languages: What's on the horizon?. *Calico Journal*, 679-709.
- Lai, C., & Li, G. (2011). Technology and task-based language teaching: A critical review. *CALICO Journal*, 28(2), 498-521.
- Lam, S. T. E. (2021). A web-based feedback platform for peer and teacher feedback on writing: An Activity Theory perspective. *Computers and Composition*, 62, 102666.
- Latifi, S., Noroozi, O., Hatami, J., & Biemans, H. J. (2021). How does online peer feedback improve argumentative essay writing and learning?. *Innovations in Education and Teaching International*, 58(2), 195-206.
- Latifi, S., Noroozi, O., & Talaei, E. (2021a). Peer feedback or peer feedforward? Enhancing students' argumentative peer learning processes and outcomes. *British Journal of Educational Technology*, 52(2), 768-784.
- Lee, I. (2012). Feedback revolution: What gets in the way? *ELT Journal*, 66(3), 353-360.
- Lightbown, P. M., & Spada, N. (1990). Focus-on-form and corrective feedback in communicative language teaching: Effects on second language learning. *Studies in Second Language Acquisition*, 12(4), 429-448.

- Liu, J., & Edwards, J. G. H. (2018). *Peer response in second language writing classrooms*. University of Michigan Press.
- Liu, J., & Sadler, R. W. (2003). The effect and affect of peer review in electronic versus traditional modes on L2 writing. *Journal of English for Academic Purposes*, 2(3), 193-227.
- Longhurst, R. (2003). Semi-structured interviews and focus groups. In S. Holloway, S. P. Rice, G. Valentine (Eds.), *Key methods in geography* (pp. 143-156). Wiley.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, 19(1), 37-66.
- Lyster, R., Saito, K., & Sato, M. (2013). Oral corrective feedback in second language classrooms. *Language Teaching*, 46(1), 1-40.
- Mangelsdorf, K. (1992). Peer reviews in the ESL composition classroom: What do the students think?. *ELT Journal*, 46(3), 274-284.
- Meskill, C., & Anthony, N. (2007). Form-focused communicative practice via CMC: What language learners say. *Calico Journal*, 25(1), 69-90.
- Nelson, G. L., & Murphy, J. M. (1993). Peer response groups: Do L2 writers use peer comments in revising their drafts?. *TESOL Quarterly*, 27(1), 135-141.
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42, 533-544.
- Pham, H. T. P. (2022). Computer-mediated and face-to-face peer feedback: Student feedback and revision in EFL writing. *Computer Assisted Language Learning*, 35(9), 2112-2147.
- Ma, Q. (2020). Examining the role of inter-group peer online feedback on wiki writing in an EAP context. *Computer Assisted Language Learning*, 33(3), 197-216.
- Rollinson, P. (2005). Using peer feedback in the ESL writing class. *ELT Journal*, 59(1), 23-30.
- Rothschild, D., & Klingenberg, F. (1990). Self and peer evaluation of writing in the interactive ESL classroom: An exploratory study. *TESL Canada Journal*, 52-65.
- Sheen, Y. & R. Ellis (2011). Corrective feedback in language teaching. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning*, (Vol. 2. pp. 593–610), Routledge.
- Sullivan, N., & Pratt, E. (1996). A comparative study of two ESL writing environments: A computer-assisted classroom and a traditional oral classroom. *System*, 24(4), 491-501.
- Tian, L., & Zhou, Y. (2020). Learner engagement with automated feedback, peer feedback and teacher feedback in an online EFL writing context. *System*, 91, 102247.

- Vygotsky, L. S. (1978). *Mind in society: Development of higher psychological processes*. Harvard University Press.
- Yu, S., & Lee, I. (2016). Peer feedback in second language writing (2005–2014). *Language Teaching, 49*(4), 461-493.
- Zhang, M., He, Q., Du, J., Liu, F., & Huang, B. (2022). Learners' perceived advantages and social-affective dispositions toward online peer feedback in academic writing. *Frontiers in Psychology, 13*, 973478.
- Zheng, B., & Warschauer, M. (2017). Epilogue: Second language writing in the age of computer-mediated communication. *Journal of Second Language Writing, 36*, 61-67.
- Zhu, W. (2001). Interaction and feedback in mixed peer response groups. *Journal of Second Language Writing, 10*(4), 251-276.
- Zong, Z., Schunn, C. D., & Wang, Y. (2021). What aspects of online peer feedback robustly predict growth in students' task performance?. *Computers in Human Behavior, 124*, 106924.