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Impact of Teacher and Peer Feedback on University Students' Spelling and Punctuation

Salwa Al-Farsi*
National University of Science and Technology, OMAN

Zouhaier Slimi
National University of Science and Technology, OMAN

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Abstract: Feedback is a crucial element in writing instruction; however, its effectiveness is still debated among scholars. This study investigates the effectiveness of teacher and peer feedback in improving spelling and punctuation skills using a quantitative experimental design that involved two pre-intermediate writing classes at the International Maritime College Oman. Twenty-six participants were randomly selected from both classes. Students' spelling and punctuation errors were assessed using a pre-test–post-test design and data were analyzed using Microsoft Excel and SPSS. Results indicated that teacher feedback significantly improved both spelling and punctuation, whereas peer feedback improved punctuation but led to a decline in spelling. Overall, teacher feedback outperformed peer feedback in enhancing writing accuracy. Due to the small sample size and focus on academic essays, findings may not be generalizable. Future research should explore additional writing genres and include larger, more diverse participant groups.

Keywords: *Corrective feedback, peer feedback, teacher feedback, punctuation, spelling.*

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Introduction

Corrective feedback has become a crucial element of writing instruction. The effectiveness of different feedback types in enhancing students' writing skills continues to spark debate in language education. While some studies suggest that teacher feedback results in greater grammatical accuracy due to the instructor's expertise (e.g., Bitchener & Ferris, 2012), others highlight the benefits of peer feedback for increasing engagement and promoting more profound understanding of writing conventions (e.g., Lundstrom & Baker, 2009). A significant gap exists in the literature regarding the comparative impact of these feedback types on foundational writing mechanics, specifically spelling and punctuation.

Teacher feedback is the most commonly used approach that often involves identifying errors with or without corrections. Peer feedback, in contrast, involves students giving and receiving feedback on each other's work. Both types have the potential to enhance students' learning outcomes (AlBakri, 2016). However, few researchers have directly examined their impact on foundational writing mechanics such as spelling and punctuation.

To address this gap, the present study investigates the effectiveness of teacher and peer feedback on the spelling and punctuation skills of pre-intermediate students at the International Maritime College Oman. The following research questions guide the study:

RQ1. Does peer feedback, as well as teacher feedback, improve students' spelling?

RQ2. Does peer feedback, as well as teacher feedback, improve students' punctuation?

This quantitative study uses a pre-test-post-test design, including two post-tests to enhance result reliability. Twenty-six students participated, divided into two groups: one received the college's standard teacher feedback, and the other received peer feedback. Their first writing task, a four-paragraph academic essay, served as the pre-test. After six hours of feedback instruction, the midterm writing assessment was used as Post-test 1, and the final writing test served as Post-test 2.

* **Corresponding author:**
Salwa Al-Farsi, National University of Science and Technology, Oman. ✉ salwa@imco.edu.om

The findings may have implications for curriculum development. If teacher feedback proves more effective, educators may prioritize explicit correction and targeted instruction. Conversely, if peer feedback is beneficial, integrating peer-review sessions into writing curricula could enhance student learning. For example, teachers could design peer feedback protocols focusing on identifying and correcting spelling and punctuation errors. The results could also inform the design of assessment tools that target these foundational writing skills.

The small sample size limits the generalizability of the results. Additionally, this study does not examine students' perceptions of feedback, which could be explored in future research.

The following chapter presents a review of the literature, beginning with an overview of written feedback, followed by a discussion of the strengths and limitations of teacher and peer feedback, and concluding with a comparison of the two approaches.

Literature Review

Writing is often considered one of the most complex and demanding skills for second language learners (Richards & Renandya, 2002; Williams, 2012). A key challenge in teaching writing is how to address and correct learner errors. Teachers have debated the most effective approaches for providing written corrective feedback (McMartin-Miller, 2014). This debate has made feedback a key area of inquiry in second language acquisition. Despite the growing body of research, findings remain inconclusive, especially when comparing feedback types. Such inconsistencies highlight the need for systematic feedback strategies to identify the conditions under which each type is most effective.

This chapter reviews what researchers have found about written corrective feedback in second language writing classes, with a focus on teacher and peer feedback. It covers the theoretical foundations, summarizes key findings, and points out areas requiring further investigation.

Feedback

Feedback is widely regarded as a fundamental component of language learning. Hattie and Timperley (2007, p. 80) define it as “information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one’s performance or understanding.” Similarly, Narciss (2008, p. 292) describes it as “post-response information” intended to inform learners about their current performance and guide them toward achieving learning objectives.

While educators generally agree on the importance of feedback, there is still debate about how effective it is in enhancing writing accuracy. Research suggests that feedback can boost short-term accuracy and support long-term language acquisition (Bitchener, 2009; Hattie & Timperley, 2007). However, Truscott (2007) argues that feedback may be ineffective if learners fail to engage with it meaningfully. He cautions that excessive correction may overwhelm students and diminish their motivation to revise. Thus, for feedback to be effective, it must be processed and acted upon (Qi & Lapkin, 2001), which makes revision and redrafting important in writing development.

Teacher Feedback

Teacher feedback, a cornerstone of writing instruction (K. Hyland & F. Hyland, 2006b), is defined as "utterances that indicate to the learner that his or her output is erroneous in some way" (Nassaji & Kartchava, 2017, p. ix). A key consideration in teacher feedback is its explicitness, ranging from direct correction of errors (Bitchener, 2008) to indirect, coded error indicators that prompt self-correction. (Bitchener et al., 2005). Ferris (2011) further distinguishes between treatable and untreatable errors, suggesting indirect feedback for treatable errors like spelling and punctuation (Brown, 2012) and direct correction for untreatable errors such as word choice.

A substantial body of research highlights the positive impact of teacher feedback on writing performance and grammatical accuracy. Studies have demonstrated improvements in specific grammatical areas, such as past tense usage (Bitchener et al., 2005; Eslami, 2014) and article use (Bitchener & Knoch, 2009; Ferris & Roberts, 2001; Haddadian, 2024; L. Yang et al., 2023). Longitudinal studies further reinforce this and show sustained language improvement over time when teacher feedback is provided (Bitchener & Knoch, 2009).

However, several studies point to potential drawbacks, including learner overload when feedback is unfocused or excessive (Frodesen & Holten, 2003; Sheen et al., 2009; Truscott, 2007), and reduced engagement when feedback is not directly relevant to the learner (Nabei & Swain, 2002). To address these issues, feedback should be tailored to students’ proficiency levels, although some argue that a narrow focus may not serve all learners needs (Lee, 2018). Additionally, contextual constraints, such as large class sizes and heavy workloads, can hinder the delivery of timely and individualized feedback, which might lead to delayed feedback (Lee, 2004; Moluayonge & Park, 2017).

In light of these challenges, alternative feedback strategies, such as peer feedback, become crucial in contexts where teacher feedback is insufficient or impractical.

The next section explores peer feedback, examining its benefits, challenges, and implications for writing instruction.

Peer Feedback

Peer feedback, encompassing peer response, editing, and review, empowers students as "sources of information" in evaluating their peers' work (Liu & Edwards, 2002, p. 75). This collaborative approach fosters student interaction and dialogue (K. Hyland & F. Hyland, 2006a; Philippakos, 2017; Rollinson, 2005), aligning with student-centered classroom environments increasingly promoted in language instruction (Dawson et al., 2023; Zhao, 2010).

A growing body of research supports the effectiveness of peer feedback in second language writing (e.g., K. Hyland & F. Hyland, 2006; Liu & Edwards, 2002; Zhang et al., 2024). Notably, numerous studies have explored its impact on revision and writing quality. For instance, Kamimura (2006) demonstrated improvements in argumentative essays following peer feedback training. The results highlight its effectiveness across proficiency levels. Similarly, research has consistently shown that peer feedback promotes gains in rule-based accuracy and writing quality. Diab (2010) found significant improvements in areas like subject-verb agreement, and Cheng and Zhang (2024) reinforced peer feedback's positive effects on both writing quality and student engagement. These studies collectively indicate that peer feedback results in significant gains in rule-based accuracy. However, the extent of these gains appears to be influenced by factors such as learner proficiency and the degree of structured interaction.

Beyond direct improvements in writing, peer feedback also plays a key role in the learning process. Gielen et al. (2010) observed that students consult external resources when faced with uncertainty, which further enhances learning. Moreover, Tsui and Ng (2000) found that reading peer writing increases error awareness, and Bitchener and Ferris (2012) highlighted its role in developing critical thinking and evaluative skills.

Despite its advantages, peer feedback poses several challenges. A critical factor is the importance of training. Studies have consistently shown that training is essential for effective peer feedback. For example, Boon (2015) and Hu (2005) demonstrated that training improves students' ability to provide feedback and student attitudes towards it. In contrast, insufficient training can lead to adverse reactions and confusion among peers (Susanto et al., 2019). Additionally, there are concerns about the focus of feedback. Van Steendam et al. (2010) noted a tendency to prioritize surface-level issues, although M. Yang et al. (2006) and Rahimi (2013) found that trained students can address higher-order concerns.

Finally, student trust in peer competence is crucial. Students may ignore peer comments if they do not trust their classmates' judgment (Kaufman & Schunn, 2011; Min, 2006). Research by Patchan and Schunn (2016) suggests that high-ability writers utilize feedback from various sources, while low-ability writers tend to rely on peers of similar skill. This pattern probably reflects the fact that more advanced writers are better at spotting errors (Hayes et al., 1987).

In summary, research demonstrates that peer feedback can be beneficial in L2 writing contexts. However, its effectiveness is influenced by several factors, including learner training, language proficiency, and the focus of feedback. Although peer feedback has shown promise in improving writing quality and fostering student engagement, contradictory findings in the literature suggest a need for further comparison with teacher feedback. The next section comparatively examines teacher and peer feedback in terms of learners' perceptions, self-efficacy, and revision outcomes.

Comparison of Teacher Feedback and Peer Feedback

Several studies have compared teacher and peer feedback in terms of student perceptions (e.g., Ruegg, 2017; Zhao, 2014) and their relative effectiveness on writing performance (e.g., Elfiyanto & Fukazawa, 2020; Gielen et al., 2010). However, conflicting findings may arise from significant variations in research methodologies, such as the use of experimental versus quasi-experimental designs, as well as contextual differences that include variations in learner proficiency levels, cultural backgrounds, and educational settings. For example, studies conducted in EFL contexts with limited resources may yield different outcomes than those conducted in ESL environments with greater access to support. Earlier studies often favored teacher feedback (e.g., Connor & Asenavage, 1994; Tsui & Ng, 2000), and this trend persists in more recent research (e.g., Ruegg, 2014), raising questions about the reliability and validity of peer feedback.

Regarding learner preferences, Srichanyachon (2012) surveyed 174 university students and found that while attitudes toward both feedback types were generally neutral, 94.8% preferred teacher feedback. Students believed teacher comments ensured more accurate error correction and thus more excellent learning benefits. Nonetheless, some participants appreciated peer discussions for promoting idea generation and motivation.

In terms of self-efficacy, Ruegg (2014) conducted a year-long study involving 67 second-year university students across four classes. Each group completed eight assignments, with two drafts per assignment. Two classes received teacher feedback, while the other two received peer feedback. Only the preliminary drafts were subject to feedback. All groups received initial training in giving and interpreting feedback, followed by a refresher session in the second semester. The results showed increased self-efficacy among students who received teacher feedback, and the participants expressed greater confidence in their writing abilities. Interestingly, these findings contradicted Ruegg's earlier study (2010), where students who received both types of feedback reported increased confidence. This difference may stem from the design: Ruegg (2010) involved mixed feedback for all students which potentially allows broader exposure, while the

2014 study used separate groups. This separation might have led to a more focused perception of each feedback type in isolation, which might have made teacher feedback seem even more authoritative.

A recurring theme in the literature is students' greater trust in teacher feedback, viewing teachers as authoritative sources who ensure quality. For example, Tsui and Ng (2000) found that students not only preferred teacher feedback but also incorporated more of it into their revisions, particularly when addressing macro-level issues such as content and organization. However, peer feedback was still valued when it included specific suggestions, even if it focused more on surface-level concerns.

Similarly, Elfiyanto and Fukazawa (2020) found that teacher feedback significantly improved content, organization, grammar, and overall language use, whereas peer feedback was more helpful for vocabulary and structural aspects. These findings suggest that while peer feedback supports certain writing skills, teacher input is often seen as more authoritative, especially for addressing broader writing concerns.

Recent studies continue to explore this dynamic. Gonzalez-Torres and Sarango (2023) found that while all feedback groups improved, direct teacher feedback led to more significant gains, especially for students with lower proficiency. However, the study reported no significant differences between feedback types (direct, indirect, and peer). However, the quasi-experimental design of the study and small sample size limit its generalizability. In contrast, Cui et al. (2021) examined trained peer feedback versus teacher feedback in an EFL context, focusing on writing performance, self-efficacy, and motivation. While both feedback types yielded similar improvements in writing and self-efficacy, trained peer feedback led to more significant gains in autonomous motivation. This highlights a key benefit of peer feedback in fostering self-regulated learning, an area not emphasized in Gonzalez-Torres and Sarango (2023). These differences likely stem from the distinct focuses of each study. While Gonzalez-Torres and Sarango (2023) emphasized proficiency gains, Cui et al. (2021) centered their research on motivation. Additionally, the differing educational contexts could also influence the results.

While recent studies have explored alternative feedback avenues, such as artificial intelligence, teacher feedback remains a strong preference among learners. Zeevy-Solovey (2024) found that even when presented with AI-generated feedback via ChatGPT, students still favored teacher feedback or a combination of teacher and AI input. This preference reinforces the perceived authority and expertise of teachers, as highlighted in earlier studies like Srichanyachon (2012), where students associated teacher feedback with greater accuracy and learning benefits.

Given the mixed findings, further research is necessary to clarify the relative effectiveness of teacher and peer feedback across diverse writing contexts. This study adds to the ongoing discussion by examining how each feedback type influences students' writing mechanics, specifically, spelling and punctuation. By focusing on these foundational aspects of writing, the study aims to offer a more precise understanding of how feedback fosters language accuracy and writing development.

Methodology

The study aimed to measure the influence of two independent variables: teacher feedback and peer feedback, on two dependent variables: spelling and punctuation. A quantitative approach was selected as the most appropriate method to enable statistical comparisons between groups. To explore causal relationships between feedback type and writing performance, a true experimental design was employed. This design enables the manipulation of independent variables and direct observation of their effects on the dependent variables.

Research Design

A true experimental quantitative design was adopted for this study. Experimental designs allow researchers to assess whether specific practices affect outcome variables by comparing different groups under controlled conditions (Creswell, 2014). As Johnson and Christensen (2019) explain, experimental designs enable the establishment of cause-and-effect relationships by systematically varying one or more independent variables.

This study followed the essential principles of proper experimental design as described by Rosen (2019), including control of extraneous variables, random selection of participants, and random assignment to groups. Two groups were created: a control group that received traditional teacher feedback and a treatment group that received peer feedback.

Random selection was used to enhance external validity, increasing the likelihood that results would generalize beyond the sample. Random assignment further supported internal validity by reducing selection bias and controlling for confounding variables. In summary, the study used a controlled, randomized structure to examine the effects of teacher and peer feedback on writing mechanics.

Study Participants

A probability sampling technique was employed. The sample was drawn from a population of 140 pre-intermediate students enrolled in the Foundation Programme at International Maritime College Oman. All students were between 18

and 19 years old and had completed high school. Their participation in the programme was intended to improve English proficiency before entering one of the college's academic programs.

The 140 students were randomly assigned to five classes. Two of these classes were randomly selected for inclusion in the study. The researcher was the writing instructor for three of the five classes, including the two selected. Each class consisted of 28 students. From each class, 13 students were randomly selected to participate, yielding a total sample size of 26 participants. Eight participants were female.

To determine whether this sample size was adequate for the study's design, a power analysis was conducted. A priori power analysis using G*Power, based on Cohen's (1988) guidelines (medium effect size, $d = 0.50$; $\alpha = .05$; power = .80), indicated that a total of 26 participants (13 per group) would be sufficient. Therefore, the selected sample size was justified both statistically and practically.

All participants received a full explanation of the study's purpose and procedures and signed informed consent forms prior to the intervention. A between-subjects design was used, where participants were exposed to only one form of feedback (teacher or peer), with no crossover. This approach allowed the researcher to isolate the effects of each feedback type on the dependent variables.

Data Collection

The intervention took place over seven weeks during a nine-week academic term. The study was conducted in two writing classes at the pre-intermediate level in the Foundation Programme. Writing classes were held three times a week for 90 minutes. Students were required to produce three drafts on four different academic topics. Each draft was followed by a 90-minute feedback session, for a total of nine feedback sessions.

The students worked independently on their drafts without assistance. A pre-test-post-test control group design was used to compare spelling and punctuation errors changes. The pre-test consisted of analyzing errors in students' first written draft. Following the pre-test, the control group received coded teacher feedback, and the treatment group received coded peer feedback. The feedback focused specifically on spelling and punctuation.

To ensure treatment fidelity, a 30-minute peer feedback training session was held for the treatment group before the study began. This session included detailed instruction on using standardized error codes ('Sp' for spelling errors and 'P' for punctuation errors), practice exercises with sample student essays to identify and code errors, and a reference sheet with definitions and examples of common errors. Participants practiced identifying both correct and incorrect usage of the error codes. Throughout the intervention, five randomly selected peer-reviewed essays per session were audited by the researcher. If inaccuracies were observed in the peer feedback, corrective guidance was provided.

The first post-test was conducted after four weeks (following four treatment sessions), using students' mid-term writing exam. A second post-test was conducted at the end of the term (after six treatment sessions), using their final writing exam. Both tests required students to write a four-paragraph academic essay.

Spelling errors were defined as any deviation from standard English spelling, including misspellings, incorrect letter choices, and homophone errors. Punctuation errors were defined as any incorrect use or omission of punctuation marks, including commas, periods, apostrophes, and quotation marks. A standardized rubric used at the college was used to categorize errors. This rubric further distinguished between minor and major errors. Minor errors were those that did not significantly impede comprehension, whereas major errors were those that caused significant confusion. To establish inter-rater reliability, a second evaluator, an experienced English language instructor, reviewed a randomly selected subset (20%) of student essays. Inter-rater reliability was calculated using Cohen's Kappa coefficient. A Kappa value of 0.80 or higher was considered acceptable. This indicates a high level of agreement between the raters. All error counts were then accurately entered into a spreadsheet.

Data were analyzed using SPSS and Excel. Results were reported in frequency tables and bar charts to visually compare the performance of both groups across the pre-test and post-tests (see Tables 1–3).

Table 1. Frequency Distribution Tables (Frequency Distribution Tables for Pretest)

Number of errors for each student	Pretest – Teacher Feedback Group	
	Spelling	Punctuation
	6	5
	22	6
	9	5
	10	2
	7	5
	6	1
	9	2
	9	2
	23	2
	11	9
	19	5
	4	3
	2	2

Number of errors for each student	Pretest – Peer Feedback Group	
	Spelling	Punctuation
	10	1
	4	0
	10	4
	15	1
	1	2
	4	0
	5	8
	6	4
	7	6
	2	2
	8	1
	7	3
	9	9

Table 2. Frequency Distribution Tables (Frequency Distribution Tables for Post-test 1)

Number of errors for each student	Post-test 1 – Teacher Feedback Group	
	Spelling	Punctuation
	6	4
	17	5
	4	2
	2	3
	7	3
	8	2
	16	3
	8	4
	10	6
	15	7
	13	3
	3	5
	3	0

Number of errors for each student	Post-test 1 – Peer Feedback Group	
	Spelling	Punctuation
	8	3
	11	3
	16	2
	26	1
	5	0
	2	2
	10	13
	5	4
	11	3
	8	0
	10	3
	8	4
	8	7

Table 3. Frequency Distribution Tables (Frequency Distribution Tables for Post-test 2)

Number of errors for each student	Post-test 2 – Teacher Feedback Group	
	Spelling	Punctuation
	4	3
	6	3
	8	6
	2	1
	10	3
	1	4
	11	4
	3	2
	8	5
	26	7
	16	1
	3	0
	5	0

Number of errors for each student	Post-test 2 – Peer Feedback Group	
	Spelling	Punctuation
	5	2
	12	2
	11	0
	47	4
	2	0
	3	2
	6	5
	8	5
	9	4
	7	1
	13	4
	10	2
	5	3

Data Analysis

Before the main analysis, descriptive statistics, including means and standard deviations, were calculated for spelling and punctuation errors in both the control and treatment groups at pre-test, mid-term post-test, and final post-test. These descriptive statistics were used to provide an initial understanding of the data trends and group performance. Frequency tables and bar charts were also created to visually represent the data and support the quantitative findings.

To account for pre-existing differences between the control and treatment groups, ANCOVA was employed to compare the two post-test scores between the groups, while statistically controlling for any pre-existing differences in pre-test scores. This method adjusts post-test results using pre-test performance to improve accuracy and control for error. The pre-test scores for spelling and punctuation errors were used as covariates in the ANCOVA model.

Before conducting the ANCOVA, several assumptions were tested to ensure the validity of the analysis. The Shapiro-Wilk test indicated that the data met the assumption of normality ($p > .05$), and Levene's test confirmed homogeneity of error variances across groups ($p > .05$). The assumption of homogeneity of regression slopes was also satisfied, meaning the relationship between pre-test and post-test scores was consistent across both groups.

All analyses were performed using SPSS. Effect sizes were reported using partial eta squared (η^2) to provide insight into the magnitude of the observed differences. Frequency tables and bar charts supported the quantitative findings.

Findings

This chapter presents the findings of the study, which aimed to investigate the effectiveness of teacher feedback and peer feedback on the spelling and punctuation skills of pre-intermediate students. The analysis focused on two research questions:

RQ1. Does peer feedback, as well as teacher feedback, improve students' spelling?

RQ2. Does peer feedback, as well as teacher feedback, improve students' punctuation?

The chapter is organized into two main sections. The first section presents the statistical results derived from pre-test and post-test analyses using ANCOVA to compare the performance of the control and treatment groups. The second section provides a critical interpretation of the results, highlighting key patterns and discussing their relevance to existing literature.

Two separate ANCOVAs were conducted, one to analyze spelling errors, and one to analyze punctuation errors.

Does peer feedback, as well as teacher feedback, work in improving students' spelling?

To answer the first research question, the total number of spelling errors in both groups was recorded across the pre-test and two post-tests. Figure 1 illustrates the overall frequency of spelling errors for both groups across the three assessment points.

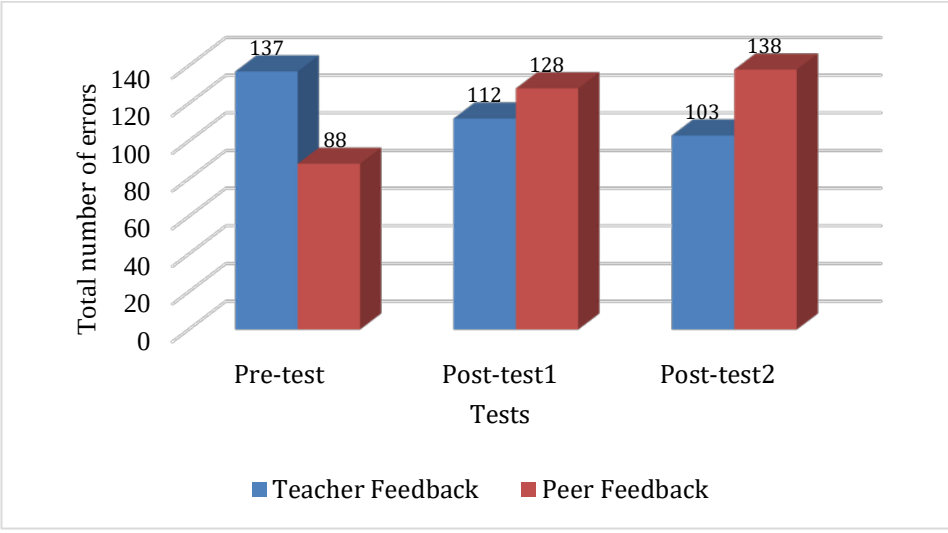

Figure 1. The Effectiveness of Feedback on Students' Spelling Skills

Initially, the teacher feedback group exhibited a slightly higher number of spelling errors ($M = 27.08$, $SD = 15.20$) compared to the peer feedback group ($M = 27.23$, $SD = 19.93$). However, the progression of results over time revealed a divergence in performance trends between the two groups. After the intervention, the teacher feedback group demonstrated a clear reduction in spelling errors, while the peer feedback group showed an increase.

Specifically, the pre-test revealed 137 total spelling errors in the teacher feedback group and 88 errors in the peer feedback group. By post-test 1, spelling errors in the teacher feedback group had decreased by approximately 18%, whereas the peer feedback group showed a 45% increase in errors. In post-test 2, the teacher feedback group further reduced their errors, reflecting a 24% decrease compared to the pre-test. In contrast, the peer feedback group's errors increased by 56.8% from their pre-test baseline.

These trends suggest that students who received teacher feedback experienced improvements in spelling accuracy, while those receiving peer feedback did not benefit to the same extent. Descriptive statistics further support these findings: the mean number of spelling errors in the teacher feedback group decreased slightly from M = 27.08 (SD = 15.20) to M = 26.92 (SD = 15.32), whereas the peer feedback group's mean increased from M = 27.23 (SD = 19.93) to M = 27.38 (SD = 20.15) between the pre-test and post-test 2.

To determine whether these observed differences were statistically significant, an Analysis of Covariance (ANCOVA) was conducted. Results showed no statistically significant difference between the two groups: $F(1, 23) = 0.0005$, $p = .983$, *partial* $\eta^2 = 0.000$, 95% *CI* [-0.777, 0.760]. This indicates that while there were numerical differences in spelling errors between the teacher feedback and peer feedback groups, these differences were not large enough to conclude that they were caused by the type of feedback rather than by random chance. This suggests that neither feedback method demonstrated a statistically significant difference in their effectiveness in improving spelling. It is important to acknowledge that this non-significant result does not necessarily mean that the feedback types have no effect, but rather that this study did not provide sufficient evidence to conclude that the observed differences were due to the feedback.

Effect size analysis also revealed a negligible impact of peer feedback on spelling, d = -0.009, 95% CI [-0.777, 0.760]. Cohen's d measures the magnitude of the effect, and in this case, the value of -0.009 indicates a very small effect size. This suggests that peer feedback had a negligible practical impact on spelling performance in this study. While the statistical test showed no significant difference, the effect size further emphasizes that the influence of peer feedback on spelling was minimal.

In summary, while descriptive data indicated that teacher feedback may have had a positive influence on reducing spelling errors, the differences between the groups were not statistically significant. It is important to acknowledge that this non-significant result could be attributed to the study's limitations, such as the small sample size, which may have limited the statistical power to detect significant differences. Peer feedback, in contrast, was associated with an increase in spelling errors, suggesting limited effectiveness in improving spelling accuracy.

Findings for RQ2: Do peer and teacher feedback improve students' punctuation?

To address the second research question, the number of punctuation errors in both groups was analyzed across three time points: pre-test, post-test 1, and post-test 2. Figure 2 presents a visual summary of punctuation errors over the course of the intervention for both groups.

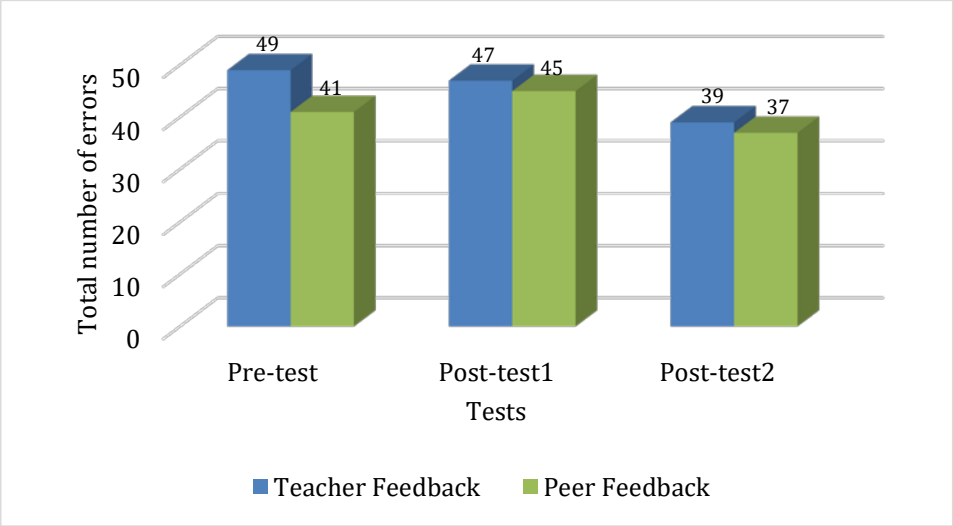

Figure 2. The Effectiveness of Feedback on Students' Punctuation

As shown in Figure 2, the number of punctuation errors prior to the intervention was relatively similar across groups, with the teacher feedback group recording a slightly higher error count (49 errors). Following the initial intervention (post-test 1), punctuation errors in the teacher feedback group showed a minor decline, whereas the peer feedback group experienced a slight increase of four errors.

However, results from post-test 2 indicate a general decline in punctuation errors for both groups. Compared to the pre-test, the teacher feedback group demonstrated a total reduction of 10 punctuation errors, while the peer feedback group showed a reduction of four errors. These findings suggest that both feedback types contributed to improvements in students' punctuation accuracy over time, though the improvement was more pronounced in the teacher feedback group.

In terms of percentages, analysis of spelling and punctuation errors from pre-test to post-test 2 revealed that the teacher feedback group experienced a 24.8% reduction in spelling errors and a 20.4% reduction in punctuation errors. Conversely, students in the peer feedback group had a 56.8% increase in spelling errors but a 9.7% reduction in punctuation errors.

Descriptive statistics support these observations: in the teacher feedback group, the mean number of punctuation errors decreased from M = 10.38 (SD = 5.04) in the pre-test to M = 9.23 (SD = 4.89) in post-test 2. Similarly, the peer feedback group showed a reduction from M = 9.23 (SD = 6.92) to M = 8.46 (SD = 6.71).

To determine whether these changes were statistically significant, an ANCOVA was conducted. The results indicated no significant difference between the two groups: $F(1, 23) = 0.237$, $p = .631$, *partial* $\eta^2 = 0.010$, 95% *CI* [-0.582, 0.959]. This means that although there were changes in punctuation errors in both groups, these changes were not statistically significant. This suggests that neither teacher feedback nor peer feedback was demonstrably more effective than the other in improving punctuation. While the data shows numerical differences, we cannot conclude that they are attributable to the type of feedback with a high degree of confidence. The effect size (*Cohen's d* = 0.191, 95% *CI* [-0.582, 0.959]) suggests a small, non-significant advantage for peer feedback, although this result should be interpreted with caution. A Cohen's d of 0.191 is considered a small effect size, indicating that the observed difference between the feedback types on punctuation is limited in practical significance. Even though the analysis points towards a slight advantage for peer feedback, the small effect size implies that this difference may not be substantial enough to have a meaningful impact in a real-world classroom setting.

In summary, while both feedback types were associated with a reduction in punctuation errors, the differences between teacher and peer feedback were not statistically significant. It is important to acknowledge that this non-significant result should be interpreted with caution, considering the study's limitations, such as the small sample size. These findings indicate that peer and teacher feedback may be similarly effective in helping students improve punctuation, at least within the context and sample of this study.

Discussions

Does peer feedback, as well as teacher feedback, work in improving students' spelling?

Spelling is a critical component of effective written communication. Al-Jarf (2010) argues that insufficient spelling skills can serve as a barrier for second language learners, hindering their ability to produce comprehensible writing. Similarly, Khuwaileh and Al Shoumali (2000) note that poor spelling may lead to misinterpretation of written content. Despite this, Moats (2005) observed that some educators downplay the importance of spelling instruction. Accurate spelling facilitates clarity in writing, which makes it an essential element of English language instruction. Explicit instruction can promote understanding of spelling rules and morphology, which helps learners build deeper lexical awareness (Moats, 2005).

Spelling improvement has been closely linked to corrective feedback. According to Okyere et al. (1997), error correction is a key instructional variable in acquiring spelling skills. Consistent with Ferris and Roberts (2001), the findings of this study support the effectiveness of teacher feedback in enhancing spelling accuracy. Participants in the teacher feedback group showed marked improvement: from 137 spelling errors in the pretest to 112 in post-test 1 and 103 in post-test 2, following six hours of feedback sessions. This result supports the theories of corrective feedback, where timely and accurate feedback from a teacher significantly impacts the learning process. Moreover, it aligns with skill development models that emphasize the importance of guided practice and expert instruction. The teacher's role in providing structured feedback facilitated the development of students' explicit knowledge of spelling rules, resulting in measurable improvements. Specifically, the 'input hypothesis' suggests that learners acquire language by understanding input that is slightly beyond their current level (Krashen, 1985). In this context, the teacher's feedback provided that necessary 'i+1' input, while the peer feedback may have provided inaccurate or insufficient input which may be stem from the lack of expert guidance. Student motivation and confidence may also influence feedback effectiveness. Self-efficacy impacts engagement and improvement (Ruegg, 2014), and in this study, the teacher feedback group's better results could reflect higher motivation or confidence in teacher feedback. The peer feedback group's spelling outcomes might be due to lower confidence or motivation.

Although both groups had access to mobile dictionaries during revision, students who received teacher feedback appeared to benefit more. In contrast, the peer feedback group exhibited a substantial increase in spelling errors, rising from 88 in the pretest to 138 in post-test 2. This unexpected outcome may be attributed to several factors. First, the orthographic differences between students' first and second languages (Khan, 2011) and the absence of structured spelling instruction (Bursuck & Damer, 2010) could have influenced performance. Furthermore, students may have engaged in informal peer discussions during revisions without verifying spelling through dictionaries.

Training is likely another contributing factor. Research highlights the importance of providing learners with structured training in peer feedback to develop analytical skills and improve the quality of comments (Law et al., 2020). Without such training, learners may lack the ability to accurately identify or correct spelling errors, especially if their own proficiency is limited (Hu, 2005). As a result, students may inadvertently mislead peers during the feedback process, contributing to erroneous revisions. This result supports the language acquisition theory, where the output of the peer feedback group was hindered by their lack of expert input.

Another consideration is students' perceptions of their peers' competence. Li (2009) found that students often distrust peer feedback, particularly in technical areas like spelling. This lack of confidence may have led students to dismiss peer suggestions or rely on incorrect information. Additionally, the collaborative nature of peer feedback requires sufficient time for discussion and analysis. Although equal time was allocated to both groups, peer discussions may have been more time-consuming and less focused which increases the potential of leaving some errors unaddressed. Furthermore, as the current study did not assess students' perceptions of peer feedback, negative attitudes toward the process may also have contributed to its ineffectiveness.

In sum, the data indicate that teacher feedback effectively improved spelling accuracy, while peer feedback was associated with increased errors. However, the generalizability of these findings is limited due to the small sample size.

Does peer feedback, as well as teacher feedback, improve students' punctuation?

Punctuation is another essential aspect of writing that aids comprehension. According to Adekola and Lawal (2017), punctuation involves the use of conventional signs and typographic elements to enhance understanding of written texts. This study focused on two fundamental punctuation marks: Commas and full stops. Students were instructed to avoid using question marks and exclamation marks to maintain formal academic tone.

The findings indicate that teacher feedback contributed to a reduction in punctuation errors. In the pretest, the teacher feedback group made 49 punctuation errors. This decreased marginally in post-test 1 and significantly in post-test 2, with a total reduction of 20.4%. This suggests that focused teacher feedback is effective in improving students' punctuation skills over time.

The peer feedback group also showed improvement, but to a lesser extent. Initially, they committed 41 punctuation errors, which increased slightly in post-test 1 but decreased to 37 in post-test 2; a reduction of 9.7%. While the short-term impact of peer feedback was negligible, these findings suggest a delayed positive effect. Overall, peer feedback demonstrated potential in improving punctuation, though teacher feedback yielded greater reductions in errors.

A review of students' written work revealed several recurring punctuation mistakes. The most common was the inappropriate placement of commas at the end of complete sentences, which disrupted sentence clarity. For instance, one student wrote, *"However, it is still important for students to learn it; there are two reasons to learn English*." In this case, the comma misleads the reader into assuming the sentence is incomplete. Another frequent error was misplacing commas after introductory words. For example, students incorrectly punctuated phrases such as "*The first reason students need to find a job*,".

Additionally, students sometimes used commas to join independent clauses, resulting in comma splices. For example: "*English is the most popular language, people can talk with different nationalities*." This misuse may lead readers to interpret the sentence as disjointed. A further issue was the omission of commas after conditional clauses, which again may reflect a limited understanding of punctuation in complex sentence structures.

These findings align with the idea that learners often apply punctuation rules inconsistently. While both feedback types contributed to a reduction in punctuation errors, teacher feedback appeared more effective in addressing these complex patterns.

The findings of this study diverge from those of Elfiyanto and Fukazawa (2020), who concluded that teacher feedback had no effect on writing mechanics, while peer feedback improved mechanical accuracy. In contrast, the current study demonstrated the effectiveness of teacher feedback in improving both spelling and punctuation, while peer feedback showed improvement only in punctuation and, notably, increased spelling errors. These contradictory outcomes may be explained by differences in context, sample characteristics, and training provided for peer feedback. In line with Ferris and Roberts (2001), this study confirmed the positive impact of teacher feedback on linguistic accuracy; however, Ferris and Roberts did not investigate peer feedback. Furthermore, this study's findings are consistent with studies that demonstrate the positive impact of teacher feedback on writing performance and grammatical accuracy. For instance, studies by Bitchener et al. (2005), Eslami (2014), Haddadian (2024) and L. Yang et al. (2023) all indicated improvements in specific grammatical areas following teacher feedback, similar to the improvements observed in spelling and punctuation in the teacher feedback group in this current study.

However, unlike studies that found peer feedback to be significantly beneficial, such as those by Kamimura (2006) and Cheng and Zhang (2024), this study found peer feedback to be less effective, particularly in improving spelling. This discrepancy may be attributed to the level of training provided to peer feedback groups. Studies like Boon (2015) and Hu

(2005) emphasized the importance of adequate training for effective peer feedback, and the peer feedback group in this study may have lacked the necessary training to provide effective feedback on spelling.

Additionally, the findings of this study align with research that highlights students' greater trust in teacher feedback. Studies such as Srichanyachon (2012) and Ruegg (2014) found that students often prefer teacher feedback due to the perceived expertise and authority of teachers, which could explain the teacher feedback group's greater improvement in this study. This is also reinforced by Zeevy-Solovey (2024), who showed that even when AI feedback was available, students still preferred teacher feedback.

The current study focuses on spelling and punctuation, providing a more specific understanding of how feedback impacts language accuracy. This focus differentiates it from studies that examined broader aspects of writing, such as content and organization, as seen in Elfiyanto and Fukazawa (2020) and Tsui and Ng (2000).

The differences in the effectiveness of peer feedback between spelling and punctuation may be explained by the differing cognitive demands of each. Spelling, being a more rule-based and less flexible system, requires a higher degree of metalinguistic awareness and explicit knowledge, which the peer feedback group likely lacked. Punctuation allows for more flexibility and interpretation, which makes it more accessible to peer feedback. This difference highlights the importance of considering the specific nature of the writing mechanics when implementing feedback strategies.

Theoretical Implications

These results support theories of second language acquisition that emphasize the role of output and feedback in language development. Learners benefit from producing language and receiving corrective input. The superior performance of the teacher feedback group supports the notion that expert guidance accelerates skill acquisition, particularly in areas that are rule-based, such as spelling.

By contrast, while the peer feedback group engaged in output and feedback, their limited linguistic knowledge likely hindered their ability to provide accurate corrections. The contrasting outcomes in spelling versus punctuation may reflect the relative complexity of spelling rules, which demand a higher level of metalinguistic awareness than the more flexible rules of punctuation.

Overall, teacher feedback proved more effective than peer feedback, particularly in improving spelling accuracy. While both types of feedback contributed to improved punctuation skills, the teacher feedback group experienced greater gains. The peer feedback group, on the other hand, showed mixed results: effective in reducing punctuation errors over time but counterproductive in the area of spelling. These findings underscore the importance of expert guidance and structured training when implementing feedback-based instruction in classrooms.

Conclusion

This chapter concludes the study by summarising the key findings in response to the research questions. It then outlines the study's limitations and offers recommendations for future research.

This study investigated the effectiveness of teacher and peer feedback on pre-intermediate university students' spelling and punctuation accuracy at the International Maritime College Oman. Specifically, it addressed the following research questions:

RQ1. Does peer feedback, as well as teacher feedback, improve students' spelling?

RQ2. Does peer feedback, as well as teacher feedback, improve students' punctuation?

This study reveals a critical distinction in the efficacy of feedback types for foundational writing skills. The consistent positive impact of teacher feedback underscores its indispensable role in developing writing mechanics. Specifically, it highlights that the teacher's expertise is vital in navigating the complexities of spelling and punctuation for pre-intermediate learners. While peer feedback shows potential in flexible areas like punctuation, its limitations in spelling emphasize the necessity of structured training. In essence, this research suggests that feedback, to be truly effective, must be tailored to the specific demands of the writing skill and the learners' developmental stage.

The overall implication is that teacher feedback serves as a more reliable form of support for both spelling and punctuation skills. While peer feedback is beneficial in punctuation, it may be insufficient when addressing more rule-governed domains such as spelling, especially in the absence of proper training.

Limitations

As previously mentioned, the small sample size of this study only limits the generalisability of the findings. The results cannot be considered conclusive evidence of the effectiveness of feedback in improving students' spelling and punctuation skills. Given the quantitative design of the study, a larger sample size would be necessary to ensure that the results are representative of a broader population of English language learners.

Moreover, the study focused exclusively on pre-intermediate students. As a result, the findings may not be applicable to learners at other proficiency levels. Future research involving a more diverse participant pool could help determine whether proficiency level moderates the effectiveness of teacher and peer feedback.

As with most empirical studies, methodological limitations were also present. Although statistical analyses were conducted to assess the impact of feedback on writing accuracy, the study did not include qualitative data to explore learners' perceptions of the feedback they received. Incorporating such instruments in future research could offer deeper insight into the cognitive and affective factors influencing feedback effectiveness.

Additionally, the use of only one genre throughout the study could be seen as a limitation. Students may have responded differently if given the opportunity to engage in other forms of writing. Thus, restricting the writing task to a single genre may have constrained the generalisability of the results to other types of writing.

A further potential limitation involves the manual process of error identification. There is a possibility that some spelling or punctuation errors were overlooked during the marking process, introducing a margin of error in the data collection. This human element in error counting could have affected the accuracy of the reported results.

Taken together, these limitations highlight the need for continued research into the effectiveness of feedback on writing mechanics.

Recommendations

The generalisability of the findings is limited due to several factors: the small sample size, the study's focus on a single proficiency level, and the use of only one type of writing task. These limitations suggest the need for further research using more diverse participant groups and a broader range of writing activities.

To build on the present findings, future studies should consider several directions. First, research could explore the effects of feedback types on writing skills beyond mechanics, such as organization or coherence. Second, comparative studies could examine how teacher and peer feedback affect learners at different proficiency levels. For example, researchers might investigate the following questions:

1. Does teacher feedback result in significantly different improvements in spelling and punctuation among beginner, intermediate, and advanced English language learners?
2. How does the effectiveness of peer feedback, especially when delivered through structured and guided training, vary across these proficiency levels?

To address such questions, future research could adopt a longitudinal design, extending feedback interventions over an entire academic year. This would allow researchers to assess the long-term impact of feedback and identify the most effective strategies for various learner profiles.

In conclusion, this study contributes to the existing body of knowledge by providing a nuanced understanding of feedback's impact on foundational writing mechanics, specifically spelling and punctuation, within a pre-intermediate ESL context. It addresses a gap in the literature by highlighting the differential effects of peer feedback on spelling and punctuation skills. Furthermore, it offers new insights into the necessity of teacher feedback, particularly when focusing on rule-governed areas like spelling. By demonstrating the limitations of peer feedback in these specific areas, this study underscores the importance of tailored feedback strategies that align with both the writing skills and the learners' proficiency levels.

Ethics Statements

This paper adheres to the National University's research ethical policies and complies with all relevant institutional and international guidelines for conducting research. Participants were provided with a consent form, and their anonymity and confidentiality were maintained securely throughout the research.

Conflict of Interest

The authors declare no potential conflict of interest concerning this paper, authorship, and publication.

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Generative AI Statement

The authors have used ChatGPT 4.0 and Grammarly to review and polish the language. As this work's author(s), we used the AI tools ChatGPT 4.0 and Grammarly to polish the language. After using this AI tool, we reviewed and verified the final version of our work. As the author(s), we take full responsibility for the content of our published work.

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