# Beyond the Red Pen: Exploring the Impact of Language Peer Assessment Technology on the ESL/EFL Writers' Performance

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#### Abstract

The purpose of the current study is to investigate the influence of integrating Turnitin peer-marking feature on students' performance in a writing task within an English course. In addition, it seeks to elucidate the students' perspectives on their experience with the Turnitin peer-marking feature. To achieve these objectives, a quasi-experimental design was utilized to assess the impact both before (pre-test) and after (post-test) the implementation of Turnitin peer-marking feature. Following this, the participants were prompted to write reflection papers articulating their insights concerning their experience with the peer-marking feature. Employing a mixed-method design of quantitative and qualitative methods, the study endeavors to achieve a comprehensive view of the efficacy of employing technology-mediated peer review has an impact on improving students' writing skills, and how it is perceived by the intended users.

Keywords: peer feedback, peer-marking, Turnitin, ESL/EFL writing, quasi-experimental design

#### 1. Introduction

#### 1.1 Introduce the Problem

While addressing strategies to enhance writing in the ESL/ EFL class, it is imperative to examine approaches to enhance the feedback that students receive on their writing. The most prominent feedback of interest to both teachers and students is that provided by the instructor. According to existing research, student's improvement in academic writing in the EFL/ESL class relies heavily on the feedback a student receives from the instructor or peers (Ferris & Hedgcock, 2013). However, despite the impact this has on enhancing the students' writing performance, the instructor's feedback can be limited. One challenge arises from the large class size which may affect the number of assignments and the feedback quality that an instructor can provide. Another limitation can be the subjective nature of assessing writing skills; hence, receiving feedback from multiple readers may prove more advantageous for EFL/ESL students.

Recent research has highlighted the significance of peer feedback in a language class (Berndt, Strijbos & Fischer, 2022), providing evidence that peer feedback has a positive impact on overall performance in writing (Huisman, Saab, Van Driel, & Van Den Broek, 2018; Lu & Bol 2007; Nicol, Thomson, & Breslin, 2014). However, there remains a gap in evidence regarding the post-COVID-19 period, characterized by heightened attention among educators toward leveraging educational technology for peer feedback as an instructional resource in the classroom. Furthermore, there is a dearth of research in this area in educational institutions in the Arab Gulf region in particular. The current study therefore intends to explore the potential impact of implementing peer feedback through a specific technological tool- the peer-marking feature in Turnitin.

That being stated, the study endeavors to address the following research questions:

RQ 1: What effect does the utilization of Turnitin peer-marking feature have on the students' performance in a writing task?

RQ 2: How do students assess their experience with the peer-marking feature, both as authors and reviewers?

#### 1.2 Significance of the Study

The significance of the present study lies in its exploration of the impact of the Turnitin peer-marking feature within the post-pandemic context and an educational institution in the United Arab Emirates (UAE). Turnitin offers a variety of tools that can be utilized to support academic writing instruction. Through these tools, instructors can customize their feedback to individual students, assignments, and courses. Furthermore, the study's significance stems from the unique features of Turnitin, which collectively facilitate student engagement in online peer review and encourage critical thinking regarding substantive writing concerns. Additionally, a well-constructed grading rubric that can be applied through peer-marking features would motivate students to actively engage in peer-marking, thereby fostering improvements in both the quality and quantity of their writing.

#### 1.3 Peer Feedback

Peer feedback refers to a collaborative approach used by educators to improve various learning skills and abilities of learners through

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collaboration among learners (Alharbi & Al-Hoorie, 2020). Educators utilize peer feedback to improve students' language skills such as reading, writing, and speaking (Patchan & Schunn, 2015; Saidalvi & Samad, 2019; Yiğit & Durukan, 2023).

According to Chakarvarti (2022), using peer feedback is an inventive pedagogical approach that is being considered as a viable solution to known challenges. This approach, as delineated by Villeval (2020) involves students providing constructive critiques for their peers' work in order to improve their shared conceptual understanding and practical skills. It is believed that this method can enhance students' collective comprehension of complex concepts and their ability to apply them. Research in this domain suggests that utilizing peer feedback can also encourage self-reflection among students, leading to a deeper understanding of the course material and ultimately generating a more enthusiastic commitment to their studies.

In addition, Alharbi (2021) revealed that the students' perspectives on peer feedback in relation to their positive emotions also encompass the preferences of both providers and receivers for the type and delivery of feedback. In other words, students exhibit a favorable disposition toward peer feedback, regardless of whether it is positive or negative, and irrespective of whether it is conveyed orally or in written form. In terms of the nature of feedback, student providers express a strong preference for positive feedback, recognizing the significance of maintaining positive relationships with receivers.

#### 1.4 Turnitin PeerMark Tool

The rise in the utilization of technology for peer review is exemplified by the recent developments in Turnitin. While traditionally used to detect plagiarism in student assignments, it has now expanded with PeerMark, a tool specifically designed for peer review. Despite its potential, PeerMark remains largely uncharted territory. As a tool for writing assessment, many researchers have investigated the use of Turnitin as a peer review tool in assessing students' writing performance (Buckley & Cowap, 2013; Kostka & Maliborska, 2016; Li & Li, 2017; Sujee, Engelbrecht, & Nagel, 2016). According to Alharbi and Al-Hoorie (2020), utilizing the Turnitin PeerMark tool facilitates double-blind peer review and can potentially to stimulate critical thinking among language learners. Turnitin is widely recognized for its primary function in checking originality and detecting plagiarism in written texts. It also includes two additional modules: GradeMark and PeerMark, which are designed to assist students in tracking their learning progress and improving their academic writing skills. Several studies such as (Li & Li, 2017, 2018) have focused on the assessing instructor feedback on student writing through Turnitin's GradeMark feature, where teachers offer electronic comments on the papers submitted by students via Turnitin.

#### 1.5 Previous Research

Through Turnitin PeerMark, Razi (2016) explored digital review among 87 students. The participants received feedback from multiple sources including Turnitin PeerMark. The findings of the study revealed that higher achievers managed self- and peer-review tasks better than the lower achievers. The results suggested that there is a relationship between academic writing and reviewing skills. They also suggested that there is an impact of reviewing skills on assessment.

Li and Li (2017) used Turnitin peer feedback to assess students' performance in writing. The study revealed that students predominantly provided revision-oriented feedback for both global and local aspects. Furthermore, the survey questionnaire and reflection papers results indicated that students had positive perceptions of Turnitin-based peer feedback. They appreciated Turnitin unique features that facilitated their peer-review activities and shared their perceived constraints and constructive suggestions. In a similar study, Li and Li (2018) found that Turnitin could help students focus on global issues in their writing instead of merely local ones, and could support them in providing more useful feedback. Additionally, they found that Turnitin proved beneficial in establishing connections between specific suggestions and overall writing guidance on one hand, and facilitating the management of peer review in the classroom. Furthermore, all students expressed positive perceptions of Turnitin-based peer review.

In an experimental study, Alharbi and Al-Hoorie (2020) instructed the participants to offer feedback on their peers' essays using the PeerMark tool of Turnitin. The essays were divided into two groups, half focused on controversial topics in the Saudi society, while the other half focused on less controversial issues. The results indicated that the participants provided notably more critical and comprehensive remarks in the essays addressing controversial topics. Additionally, the participants expressed favorable attitudes toward this exercise, indicating that the ease and anonymity of online feedback enabled them to express their opinions more freely on such issues (Alharbi & Al-Hoorie, 2020).

In a study, Eppler et al. (2021) implemented Turnitin to enhance scientific communication skills among biology course students who evaluated their papers and received feedback from teachers and peers. The usability of several online learning programs, including Turnitin, for scientific writing and teacher- and peer-assessment processes was given particular attention. The findings of the study indicated that the peer-assessments were more rigorous compared with the self- and teacher-assessments. In addition, the peer scores were very close to the final grade scores. The participants believed that the writing and assessment exercises by peers were challenging but rewarding at the same time.

Douglas, Taylor, Dexter, and McNaughton (2021) conducted an experimental study to explore the impact of utilizing PeerMark as a peer review tool, while examining how pre-service teachers used Turnitin PeerMark to provide feedback on content-specific graphic organizers. The study showed that the use of Turnitin peer-marking for peer review led to higher quality graphic organizers than did self-review.

Similarly, a quasi-experimental study was conducted by (Khatoon & Jones, 2022) to assess peer-marking effect in virtual learning. The results showed that participating in an additional peer-marking activity resulted in an average increase of 3% in final grades. Additionally,

the students demonstrated enhanced total learning responsibility, satisfaction, confidence, and engagement as result of the activity.

The literature review presented above underscores the significance of Turnitin PeerMark as a valuable tool for peer review. Previous research has indicated that students have positive experiences using Turnitin peer-marking and engaging in peer review. However, there remains a gap in research within the Arab Gulf region regarding the implementation of Turnitin peer-marking to enhance students' writing abilities, which the current study aims to address.

#### 2. Method

To achieve the aim of this study, the researchers used a mixed-method approach (see Figure 1) that incorporates findings from quasi-experimental data with the qualitative data of students' views on their experience with peer-marking elicited from reflections. First, quantitative data were used to show the impact of introducing Turnitin peer-marking on the quality of the students' writing; and second, qualitative data were elicited from the students' reflections on their own experience with this technology-based peer-marking feature. The quantitative data are deemed necessary to provide an evidence-based broad view of the impact of the peer-marking feature by comparing the students' performance before and after using it, while the qualitative data are used to gain a deeper understanding of the nature of the impact that the experience has had on the students' performance in addition to the intricate details underpinning students' perceptions of the experience.

#### 2.1 The Participants

The study was conducted in one of the universities in the UAE. The participants (N=24), 6 males and 18 females, majoring in English Language and Translation, and were enrolled in *Writing 2 course*, having previously completed Its prerequisite, *Writing 1*. Both courses have been taught to the same group by one of the researchers. The students were trained to write a paragraph and to be familiar with the evaluation criteria used by the instructor. They were further introduced to the details of the evaluation rubric during one of the experiment phases.

2.2 Quasi-experimental Quantitative Design

#### 2.2.1 Step 1: The Writing Task Pre-test

The participants were instructed to complete a 75-minutes essay-writing assignment by responding to the following prompt:

Compare and contrast remote online testing and face-to-face (on-campus) testing. You may highlight the cons and pros of each mode and express your opinion whether you prefer the former or the latter. Your essay should be 250-350 words.

The students' essays were subsequently graded according to predetermined set of criteria designed to evaluate their academic writing quality, as Appendix A shows. Prior to undertaking the task, the rubric was introduced and elucidated to the students with illustrative examples.

# 2.2.2 Step 2: The Peer-marking Intervention

The students were instructed to provide peer feedback via the peer-marking feature on Turnitin. To mitigate any potential bias by the participants, the essays were distributed randomly and anonymously using the features in Turnitin peer-marking tool. In an in-class session, the participants received training on how to use the evaluation rubric which had already become familiar to them through previous assignments during the course. Alongside assigning scores to each criterion in the rubric, the students were tasked with giving comments and suggestions for improvements wherever possible. A designated section for this purpose was included in the rubric, allowing students to append comments to the text under evaluation. During the peer-review process, students used various PeerMark functions, including commenting tools.

#### 2.2.3 Step 3: Rewriting

The students were instructed to rewrite their final draft of their essays according to their peers' feedback and to address all the issues raised by their peer reviewers. The final copies were submitted and then graded by the instructor.

2.3 Qualitative Design

#### 2.3.1 Step 4: Reflection Papers

Upon completion of the experiment, the students were prompted to reflect on their experience with the Turnitin peer-marking feature, both in their roles as authors and as reviewers. They were further instructed to discuss technical aspects of the experience, outlining both the merits and concerns associated with the software, thereby enabling an examination of their perceptions of its efficiency.

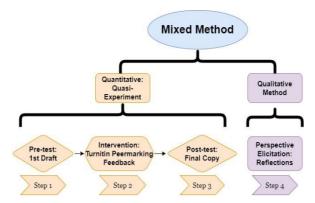


Figure 1. Mixed-method design of the study

#### 4. Results

#### 4.1 Quantitative Data Analysis

The writing assignments completed by the participants in step 1 (prior to peer-marking) and those produced in step 3 (after implementing peer-marking) were both graded by the instructor. The evaluation criteria included: language style, coherence, vocabulary accuracy and sophistication, as well as mechanics including grammar and punctuation (See Appendix A for the detailed rubric). The students were given grades from 1 (poor) to 10 (excellent). Because a quasi-experimental design is being implemented in this study, we assumed two competing hypotheses to perform a paired t-test: the null hypothesis (H0), and the alternative hypothesis (H1).

H0: there is no significant difference after the intervention.

H1: there is a significant difference after the intervention.

Before running the paired t-test, the normality of the data was checked using Shapiro-Wilk test because the sample size was n<50. The Shapiro-Wilk test did not show a significant departure from the normality, W (25) = 0.939. The results of the paired-t test and the p-value were less than .001 indicating a significantly large difference after the intervention as seen in Table 1.

Table 1. Paired t-test results

	Mean	SD	t-value	p-value
Pre-test	6.6	3.53	5.7735	.000
Post-test	7.64	2.12		

Since the p-value  $< \alpha$ , H0 is rejected. The average of the population before the intervention is considered not equal to the average of the population after. In other words, the difference between the averages of pre-test and post-test is big enough to be statistically significant. This means that the chance of a type I error (rejecting a correct H1) is small: 0.000004927 (0.00049%). The smaller the p-value, the more it supports H1.

The above results provide statistical evidence that the use of the peer-marking feature enhanced the students' overall performance in writing. Most of the students (84%) got higher grades after using peer feedback, and (75%) of the rest of the students were already high level, as Figure 2 shows.

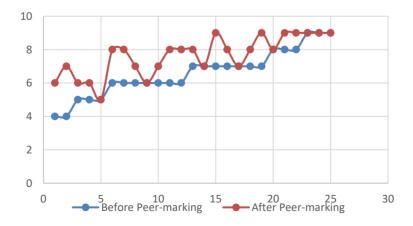


Figure 2. Students' grades before and after peer-marking

In addition, the SD value dropped after the intervention, from 3.53 to 2.12, indicating a positive change toward less variance in the sample. This means that the students' results values became closer to each other, and in this case, this indicates an improvement.

#### 4.2 Qualitative Data Analysis

Concerning the qualitative data, after submitting the final copy of their essays, the students were asked to reflect on their experience both as authors and reviewers, using the peer-marking feature in Turnitin. The task was in the form of a reflection journal. This was followed by a semi-structured in-class discussion which was recorded, but not included in the data analysis of the current paper. The students had various views, addressing several aspects, which could be summed up as follows:

- 1) The efficiency of the software
- 2) Usefulness of the comments received as authors.
- 3) Usefulness of the process as reviewers
- 4) Peer feedback versus instructor feedback
- 5) Objectivity and anonymity

#### 5. Discussion

Through the written reflections on the experience, the students unanimously expressed their overall positive attitudes toward the Turnitin PeerMark experience, both as assessors and assessees. Zoe, for example, described her overall attitude toward the activity as pleasant, maintaining that she "really did enjoy the experience and it felt all positive". Similarly, in the words of Ola, "peer-marking was a great experience". The reasons the students stated for their positive attitude could be divided into two main categories: the role of the student as an assessor (reviewer) and he role of the student as an assessee (author).

The course instructor graded the students' essays twice; pre- and post-test, i.e. before and after the students received their peers' comments and implemented suggestions for improvement. A careful comparison between the quality of the original and the revised essays clearly showed that using the comments received via Turnitin PeerMark tool helped students improve the quality of their work (Table 1). Consequently, most of the students' grades also improved significantly (Figure 2). These findings align with those of Meletiadou (2021) who illustrated that both the writing quality and the grades of students who received peer feedback improved far more substantially than did those of students who submitted revised versions without receiving peer feedback.

When peer-marking, students were clearly instructed not only to point out the existence of errors related to grammar, vocabulary, and structure with identifying their location, but also to provide clear comments on how the assessees (authors) could improve their essays in terms of ideas, coherence, and clarity. A thorough analysis of peer feedback shows that the comments varied, often constructive, including comments related to title, ideas, style, cohesion, organization, grammar, vocabulary, and writing mechanics. However, and rather predictably, most comments focused on what Biber, Gray, and Poonpon (2011) call "surface level errors" (p.8), which include spelling, punctuation marks, subject-verb agreement, and pronouns probably because such problems are comparably easy to identify. Comments related to content, coherence, and purpose, on the other hand, were far less frequent.

Seemingly, some students considered issues related to grammar, vocabulary, and spelling to be the most important. Ayla, for example, stated that she found providing feedback to be "quite insightful" because it helped her to "realize the simple elements students overlook when writing an essay. For example, missing or incorrect use of punctuation marks, spelling errors, and maintaining consistency of tenses throughout the essay". Although Ayla is a competent writer in English, in the feedback she provided to her peer —as well as in her reflection paper— she made no mention of writing issues that could be called deep(er)-level issues. Other participants seemed to be more aware of the students' limited abilities to comment on deep(er) issues. Indeed, in their written reflections, numerous students pointed out the difficulty of providing feedback on issues pertaining to improving the essay. This is probably what Rony was trying to articulate when she wrote that "some people may lack critique experience, so many students have difficulty with peer-marking because they don't know how to evaluate writing. Often, they fall back on correcting punctuation, and grammar rather than focusing on content issues". Another participant, Marya, also highlighted the fact that students did not possess the necessary skills to give thorough and constructive feedback saying "We are not professional in writing skills, and we might give wrong feedback to the errors".

Satisfaction with the usability, usefulness, and efficiency of the Turnitin PeerMark tool was recurring in the reflection papers. Although this was the first time the students had used this specific tool on Moodle, none reported difficulty in learning how to use it. This is a clear indication of the high learnability and accessibility of the tool. However, findings from other studies (Hasan, 2019; Ivanović et al., 2013), indicated that Moodle had usability problems regarding the assignment and online chat features. A possible reason for this disagreement is the fact that the current study's sample consists of students who were reasonably familiar with Moodle if not with the PeerMark tool. Alternatively, it may be that problems with the usability of Moodle are more of a "local instance" for a particular institution, as Hasan (2019, p. 4) clearly states.

As stated earlier, the final versions of the students' essays improved overall after receiving peer comments via Turnitin PeerMark and implementing them. Such a finding is in line with previous studies that reported the positive impact of peer feedback on improving students' writing skills (Greenberg, 2015; Ludemann & McMakin, 2014; Nicol et al., 2014). However, while feedback that focuses on writing problems at the surface level contributes to error reduction, the question remains as to whether it actually "leads to greater gains in

student writing proficiency than more holistically focused feedback on text content, organization, or audience/purpose" (Biber et al., 2011, p. 8). To address this important question, the original and revised essays were closely examined and compared. Noticeably, the changes were more focused on the title, grammar, vocabulary, and writing mechanics, while ideas, style, and cohesion received less attention. In the words of Amilia: "The one who corrected me, gave important notes especially about punctuation {since I have a problem with it}". Students' focus on surface-level issues, when providing comments and implementing changes, was highly evident.

The participants pointed out a few problems related to the peer-marking activity. In addition to the problem of students' low confidence in their ability to perform peer assessment, due to their inadequate grading experience and writing skills at a deeper level, numerous participants expressed their preference for teacher feedback, indicating a possible lack of objectivity with peer-marking. This finding is consistent with Campbell and Batista's (2023) study in which the participants indicated that one problem with peer-marking is that their peers lack the sufficient knowledge to provide accurate feedback. Participants in the current study noted that bias is another challenge to the transparency of the peer-marking process. In the words of Amira:

"some students may very likely try to manipulate the online system by pre-agreeing on the grading scores so that they award one another similar grades. Another issue is that some students might offer low grades to classmates they don't know personally or who aren't their close friends to give their 'friends' higher grades, which is deeply unfair"

Issues related to the overall credibility of peer assessment, such as reliability, bias, and fairness, were investigated by a few researchers such as Pearce, Mulder, and Baik (2019), who indicated that among the measures suggested to improve the credibility of peer assessment are anonymity and using a clear rubric. Although both measures were used in the present study, and the rubric was clearly explained to the students prior to undertaking the peer review task, not all students had enough confidence in the process. During class discussion, it became apparent that anonymous submissions could sometimes be less efficient as students always had the chance to check the authorship of the written piece unless the peer-marking task was conducted in class under the supervision of the instructor.

Finally, another problem mentioned by two students was focusing on points of weakness while almost totally overlooking areas of strength. Evidently, this was frustrating to some students, for example, Amilia said:

"But I would like to say to anyone who corrects any type of writing, that it would be better to write the positives besides the mistakes to support the writer and pay attention to the attitude when saying or pointing out the errors"

This problem could be overcome, at least partially, by including an item in the rubric that explicitly directs students to the importance of highlighting areas of strength and complimenting the writer on them. In this case, the students are trained to incorporate the reviewers' comments by motivating the authors and avoiding extremely negative comments while maintaining the purpose of their role as peer reviewers by providing productive critical comments.

### 6. Conclusion

Although some learners prefer teacher feedback, this is not a substitute for peer feedback because the former tends to address the macro-structures while the latter enhances the sense of real audience, and therefore raises awareness of weaknesses and encourages collaborative learning (Tsui & Ng, 2000). Along these lines, some of the students' reflections highlighted the benefits of receiving feedback from 'like-minded' reviewers who have apparently gone along similar paths of learning and can be potential resources for learning more sophisticated vocabulary and complex language structures, corroborating previous research such as Chen's (2010). Even though the assignment of students to each other was random and anonymous, some students indicated that peer empathy negatively affected the objectivity and severity of reviewers' comments. In some reflections, it was brought up that, out of kindness, some students may have turned a blind eye to serious errors to avoid embarrassing a classmate regardless of who he or she was. However, upon evaluating the participants' comments, the instructor indicated that peer empathy was reflected in the grades rather than in the comments themselves. This explains why there was an evident improvement in the students' writing in the final versions of their essays.

Based on the results of the current research, it is recommended that writing instructors incorporate peer feedback into their class activities. In addition to what the participants highlighted in their reflections, the findings of previous research proved the usefulness of this strategy in enhancing the students' audience awareness and social skills and reducing the instructor's grading load (Wu & Schunn, 2021). However, this strategy should be used vigilantly because it must be introduced within the context of a strongly embraced culture of ethical practice that values honesty and objectivity and regards bias and plagiarism as misconduct. Additionally, for this strategy to be efficient, the instructor should be capable of preparing well-designed rubrics, which he/she can train the students to understand and use accurately to achieve the desired goals of peer-marking.

Regarding technology incorporation, it seems that the younger generation (generation Z) has done well in learning and adapting to this feature on Turnitin. The instructor indicated that the training session was short, engaging, and appealing to the students. Some students indicated that using an online technique was more convenient because handwriting could be a challenge for both the reviewer when it is hard to read poor handwriting, and the author where writing by hand could be slower. In addition, typing on a keyboard would guarantee greater anonymity because, unlike handwriting, it was beyond recognition.

#### 7. Ethical Procedures

Consent was obtained from all participants after a thorough explanation of the study procedures, potential risks and benefits, and the right to withdraw from the study at any point. To ensure participant anonymity and adhere to ethical data handling practices, we have utilized

pseudonyms throughout the discussion section. This approach protects the participants' identities while preserving the integrity and clarity of the findings. All data were kept confidential throughout the research process.

#### 8. Limitations

Despite the insights provided by the current study, the sample size is one of the challenges to the statistical significance of the results. With a larger sample (n>50), more statistical tests could be run, producing more powerful results of the impact of the intervention. Additionally, due to the small population size, it could be inferred that the assignment was not completely anonymous. Some students were able to guess the authors of the essays that they were evaluating, which was threatening the objectivity of the evaluation. Lack of anonymity can be a threat to the potential of peer feedback to be critical and constructive (Lu & Bol, 2007). In addition, the time period of training on providing peer feedback and using the rubric was another limitation. Despite the training sessions, some students indicated that they lack the experience and language proficiency that would qualify them to correct the work of others.

#### 9. Recommendations for Future Research

- 1) Future research should look at how online peer review affects students and what advantages it has for them in a variety of teaching scenarios.
- 2) Future research should include social validity or qualitative validity measures to understand the process preservice teachers go through when conducting peer and self-reviews.
- 3) Future research may look into various peer review methods available in course management systems (such as Blackboard, Canvas, and Moodle) as well as traditional peer review, which involves the teacher manually exchanging student work.
- 4) Future research should devote additional time to the intervention process in order to help the students better grasp how to provide and accept feedback from their peers, understand the feedback that their instructor provides, and edit their own writing before turning it in to the teacher.

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#### **Authors contributions**

- Dr. Sumaya Daoud was responsible for performing the experiment, data collection and data analysis.
- Dr. Elham Hussein was responsible for writing the discussion section.
- Dr. Swasan Taha was responsible for the literature review.
- Dr. AbdulSalam Al Namer was responsible for the introduction, proof reading, formatting the manuscript and references.

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#### **Competing interests**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

# Informed consent

Obtained.

#### **Ethics** approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

## Provenance and peer review

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#### Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

# Data sharing statement

No additional data are available.

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# **Appendix A**Writing Task Rubric

Areas of Assessment	A	В	С	D
Ideas Grading	Presents ideas in an original manner 2 marks	Presents ideas in a consistent manner 1.5 marks	Ideas are too general  1 mark	Ideas are vague or unclear
Organization	Strong and organized beg/mid/end	*	Some organization; attempt at a beg/mid/end	0.5 marks  No organization; lack beg/mid/end
Grading	1 mark	0.75 marks	0.5 marks	0 mark
Understanding	Writing shows strong understanding	Writing shows clear understanding	Writing shows adequate understanding	Writing shows little understanding
Grading	1 mark	0.75 marks	0.5 marks	0.25 marks
Word Choice	Sophisticated use of nouns and verbs make essay very	Nouns and verbs make essay informative	Needs more nouns and verbs	Little or no use of nouns and verbs
Grading	informative 2 marks	1.5 marks	1 mark	0.5-0 marks
Sentence Structure and punctuation Grading	Sentence structure enhances meaning; flows throughout piece 3 marks	Sentence structure is evident; sentences mostly flow 1.5 marks	Sentence structure is limited; sentences need to flow 1 mark	No sense of sentence structure or flow 0 mark
Mechanics Grading	Few (if any) errors 2 marks	Few errors 1.75 marks	Several errors 1 mark	Numerous errors 0.75 – 0 marks
Total Mark	/10			