Unlocking the Power of Peer Assessment Technique: A Catalyst for Enhanced Writing Skills in Higher Education

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ABSTRACT

The Peer Assessment Technique provides an opportunity for individuals to evaluate each other, and encourages lifelong learning and continuous improvement. Moreover, this current study aims to investigate the impact and influence of the Peer Assessment Technique on students' writing skills. Besides, the first-year students in the odd semester of 2023/2024 who attended the writing class were selected as the research sample using the simple random sampling technique. The Peer Assessment Technique was used as a treatment in the experimental class. Then, the scores from the students' post-test were analyzed using the Mann-Whitney test to see the significance between the two classes. As a result, the data analysis showed that the Z score was negative (-4.161.), which indicated that an alternate hypothesis (Ha) was accepted, and the null hypothesis (H0) was definitely rejected. At the same time, the Peer Assessment Technique is considered to have a notable impact on promoting students' writing skills since it has promoted a more efficient and quality-oriented learning environment.

1. INTRODUCTION

Proficiency in writing is an essential skill in written communication. At the same time, it entails the ability to express thoughts, opinions, or knowledge clearly and effectively through text. It covers various aspects, including the selection of appropriate words, correct grammar, good structure, and the ability to string sentences and paragraphs together so that the message to be conveyed can be well understood by the reader. Besides, McLean (2012) expresses that the capability also involves the ability to think creatively, plan your writing, and organize your ideas well. Thus, having strong writing skills allows one to communicate their thoughts and ideas clearly, influence readers, and achieve their written communication goals.

In the Indonesia’s education framework, writing has a critical impact on achieving student learning goals (Indasari et al., 2019). Accordingly, as written on the lesson plan, university level employs a curriculum which focuses on student-centered learning and requires students to have a deep understanding of facts, concepts, procedures, and metacognitive knowledge. This prompts students to think creatively, process information productively, evaluate critically, and learn independently and collaboratively. Within this context, writing serves as an important medium for expressing ideas and
meeting the demands of the curriculum which demands students’ ability to think critically, collaborate, and innovate (Bastian et al., 2023; Meletiadou, 2021).

According to Haeriyati, Gumilar, & Darmawangsa (2023) the process of teaching writing at university level is an educational process that aims to help students develop their writing skills in a higher academic context. However, at the university level, the goal of teaching writing goes beyond basic mastery of grammar and sentence structure. It attempts to guide students in producing more complex and analytical pieces of writing, such as essays, research papers, or other academic assignments (Alharbi & Alqefari, 2022; Elfianto, 2020). Then, we can understand the depth of knowledge and critical thinking skills not only by engaging in the teaching of college writing and making sure students master the basic mechanics of language, but also about preparing them to create complex and analytical written works.

The pursuit of writing at the university level also includes teaching critical skills, such as the ability to develop strong arguments, investigate credible sources of information, and formulate ideas clearly and systematically (M. Abbas & Fathira, 2022). Moreover, Rahma et al., (2023) argue that throughout this process, learning approaches can vary, including class discussions, collaborative writing, individual coaching, and feedback on written work. At the same time, students are helped to become competent and critical writers in the academic environment of the university, with the ability to convey their ideas effectively in the various formats and disciplines they study (Kurniati et al., 2020).

In an initial attempt to uncover the root causes of problems in students’ writing skills at Universitas Pahlawan Tuanku Tambusu, an experienced lecturer in English courses has carried out an investigation that revealed two main difficulties. To begin with, students tend to face difficulties in constructing detailed sentences, which in turn affects the overall quality of their writing. The underlying problem that arises previously is the students’ difficulty in constructing detailed sentences and this has a negative impact on the overall quality of writing they produce (Gielen et al., 2010; Rizky, 2020).

Moreover, the students appear to struggle in exploring and developing their ideas effectively in written works. Furthermore, in the learning process, the dominant approach is for the teacher to be the centre, but this tends to ignore the potential and resources possessed by the students (Cacay, 2022). However, a more traditional learning approach that emphasizes the teacher as the source of knowledge and the leader of the learning process is the dominant learning approach. In other words, a more traditional learning approach that emphasizes the role of the teacher as the source of knowledge and leader in the learning process. This can neglect the potential and resources possessed by students, making it less supportive of developing students’ creativity and ability to contribute actively in the learning process (Meletiadou, 2021; Romadlon, 2022).

Also, Cacay (2022); Fathi & Khodabakhsh (2019) and Meletiadou (2021) mention that due to time restrictions and a high intake of students, effective lesson planning can be challenging. It is likely that the lecturers will have to find ways to optimize the use of their time, design efficient learning strategies, and address differences in student understanding in order to keep learning effective (Adhiyanti et al., 2018; Jufri, 2016). Yet, the researcher offers a solution that is likely to alleviate this deficiency by using peer assessment. It is assumed that peer assessment allows students to assess and provide feedback to each other, thus creating a more inclusive and transparent learning environment (Haeriyati et al., 2023; Meletiadou, 2021).

As stated by Cacay, (2022); Fathi & Khodabakhsh (2019) and Li et al., (2020) the Peer Assessment Technique is a very effective to overcome various problems that often arise in collaborative learning contexts, not least for promoting writing skills. It enables each member of the group to assess the contribution of their peers, so that imbalances can be identified and addressed. In addition, it could also help overcome the problem of subjective assessment. Through the reliance on peer assessment, it is not only an effective strategy to overcome problems in learning to write, but it also has the potential to be a solution that helps create a fairer and more efficient learning environment (Rahma et al., 2023).

In terms of education, Meletiadou (2021) defines that peer assessment as an effective strategy to foster a sense of responsibility and independence in student learning. As a facilitator, the lecturer direct students to learn from the evaluations they receive from their fellow colleagues. Then, it is important for lecturers
to carefully integrate the peer assessment, as this will provide a significant positive boost to the development of students’ writing skills (Hayati et al., 2022 & Romadlon, 2022). In addition, students become active in evaluating their peers’ work, gain a deeper understanding of the learning process, and cultivate confidence in the assessment of their own abilities. Thus, by using the peer assessment method, lecturers can create a learning environment that is more in-depth and beneficial to students’ academic development (Falchikov, 2005).

Previous research on Peer Assessment Technique in teaching writing has revealed important findings. Yet, numerous research discovered by (Ayu et al., 2022; Haeriyati et al., 2023; Indasari et al., 2019; Mantra et al., 2020 & Mumpuni et al., 2022) discovered that the Peer Assessment Technique can improve the quality of students’ writing. Through Peer Assessment Technique, students can receive more diverse and in-depth feedback on the quality of their writing, which may not be possible through teacher assessment alone (Indasari et al., 2019).

Apart from that, research by Habiburrohman (2019) reveals that the Peer Assessment Technique was able in developing students’ analytical skills and understanding of writing concepts. During the assessment process, students need to understand the assessment criteria and analyze their peers’ writing carefully, which can enhance their understanding of the key elements in writing. Thus, previous research has provided strong evidence that the Peer Assessment Technique is a valuable tool in improving students’ writing skills and the development of their analytical skills in the context of writing.

It is widely recognized that research on Peer Assessment Technique in teaching writing skills have been the focus of increasing attention in education (Meletiadou, 2021; Romadlon, 2022). Consequently, in regardless of previous studies that have explored various evaluation methods in the process of learning writing, this study is primarily aimed at exploring the impact of Peer Assessment Techniques in teaching writing skills to the first-year students at Universitas Pahlawan Tuanku Tambusai. Therefore, this study introduces an innovative approach and enriches our understanding of how peer assessment techniques can be more effective in improving writing skills at the university level.

In addition, in the ever-evolving world of education, this research is exposed to the presentation of recommendations and practical guidance for teachers and educational institutions in improving their methods of teaching writing skills by utilizing Peer Assessment Techniques. Hence, it is important to understand whether the use of Peer Assessment Techniques can be a useful tool in improving the writing skills of first-year students. Therefore, the researcher expects that Peer Assessment Techniques can significantly impact students’ learning outcomes in their writing skills, and that this can provide additional benefits in the teaching context at Universitas Pahlawan Tuanku Tambusai.

2. METHODS

The research which is an investigation related to the impact of the Peer Assessment Technique on writing skills has been conducted at the Faculty of Education, Universitas Pahlawan Tuanku Tambusai, on students majoring in English education in the first year of the odd semester of the 2022/2023 academic year who take writing courses. It consists of several stages, using the Simple Random Sampling technique for the selection of research subjects. In this technique, sampling is obtained from the population randomly without regard to the strata in the population and each member of the population has the same opportunity to be sampled (Sugiyono, 2017). Aside from that, Isnawan (2020) argues that a quasi-experimental design and post-test design were then adopted to quantify numerically and it suits related to the investigation on the students’ learning outcomes in writing (Cohen et al., 2013).

In the study, the treatment was carried out for five meetings from the start of the material until the material was finished, which began with practice and then treatment during the learning process. Furthermore, in the experimental class, the researcher used peer assessment techniques to teach writing. Written tests were given to both classes to assess the difference in learning outcomes. Pre-test was conducted at the beginning of learning and then at the end of learning, post-test was conducted to measure students’ learning outcomes on writing skills.
In addition, in order to analyze the data, the researcher decided to analyze it using SPSS data analysis. Therefore, the researcher undergoes using Mann-Whitney test, which had been carefully prepared through normality test. Thus, the Mann-Whitney test was conducted with the aim of seeing the significance of Peer Assessment Technique on students' writing skills.

3. FINDINGS AND DISCUSSION

3.1 Testing Significance: Mann-Whitney Test Validating Peer Assessment Technique

In this study, the implementation of Peer Assessment Technique was carried out within five meetings, starting from the initial drill until the material was completed. Furthermore, in the experimental class, the researcher utilized the peer assessment technique to teach writing skills. Student learning outcomes were then evaluated through pre-test at the beginning of learning and post-test at the end of learning. Furthermore, the data were analyzed with the help of SPSS software, and the t-test was used to determine whether the use of the peer assessment technique had any significance on students' writing skills.

All of the data that was analyzed in this study were the results of the students' writing tests from the two classes, which were then evaluated by two experienced raters. Following the data collection and processing, the researcher detailed the post-test scores of the two classes in Table 1, which represents the first step to identifying the extent to which the use of the peer assessment technique has a significant effect on students' writing ability. Information on the representation of data processing results can be seen in Table 1 below:

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Class</td>
<td>23</td>
<td>54.50</td>
<td>94.00</td>
<td>81.3194</td>
<td>9.04446</td>
</tr>
<tr>
<td>Control Class</td>
<td>21</td>
<td>43.50</td>
<td>91.00</td>
<td>71.0000</td>
<td>11.20944</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accordingly, the researcher has included descriptive statistical data comparing the results of the two groups, the experimental and control classes. A total of 23 research subjects were in the experimental group, with a range of scores (minimum to maximum) between 54.50 and 94.00. The mean of the results obtained in this group was about 81.3194, and the standard deviation was about 9.04446. In contrast, the control group contained 21 research subjects, with a range of scores between 43.50 and 91.00. The average of the results obtained in the control group was about 71.0000, and the standard deviation was about 11.20944.

Out of this data, it can be concluded that the experimental group had a higher mean result than the control group, which was about 81.3194 compared to 71.0000. In addition, the lower standard deviation in the experimental group (9.04446) indicates that the individual results in the group tend to be more homogeneous or less varied compared to the control group which has a higher standard deviation (11.20944). Nonetheless, keep in mind that further analysis, such as normality tests, is required to determine whether the difference between these two groups is statistically significant.

Associated with the post-test data obtained from both classes, further measurements were carried out normality test. At the end of the test, this test is a requirement to conduct further tests. This experiment used the Shapiro-Wilk formula to test the normality of the post-test data. For the post-test normality test results, see the following table:
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The normality test results for the two class groups, namely the experimental class and the control class, are reflected in Table 2 with the aim of seeing whether the data is normally distributed. Accordingly, there are two types of normality tests used, specifically Kolmogorov-Smirnov and Shapiro-Wilk, and the results of each test are measured by statistics and significance levels (Sig.).

In terms of the experimental class, the Shapiro-Wilk test results showed a statistical value of 0.927 with a significance level of 0.025. This suggests that the data tends to follow a normal distribution, especially based on the significance value of the Shapiro-Wilk test which was smaller than 0.05. On the contrary, for the control class, it ought to be noted that the significance of Shapiro-Wilk for the Control Class was very low (0.000), which may indicate that the data in the Control Class significantly does not follow a normal distribution.

In some cases, therefore, although the data in the Control Class may be closer to normality compared to the Experimental Class, this result still indicates that the two groups of data do not fully follow a normal distribution. Accordingly, the results of the normality test, which are close to a normal distribution, provide a good basis for proceeding with the T test in the form of the Mann-Whitney Test on both class groups.

Furthermore, the statistical test of Mann-Whitney, which is a non-parametric method, was used to assess the initial ability between the experimental and control classes. However, due to the fact that the data used did not meet the requirements of normal distribution in whole or in part, this approach was chosen. In a significance level $\alpha$ of 0.05, the hypothesis used is that the null hypothesis (H0) will be rejected and the alternative hypothesis (Ha) will be accepted if the two-tailed significance value (p) is less than $\alpha$ (0.05). Therefore, the results were analyzed using the Mann-Whitney test to show whether there was a significant difference between the two groups.

Data from table 3 reveals the results of the Mann-Whitney test to test the difference between the experimental class and the control class in the post-test. This can shed light on whether there is a significant difference between the two groups. Accordingly, the mean rank result for the experimental class was 45.33, while the control class only had a mean rank of 25.09. This shows that the experimental class had a higher rank in the post-test as opposed to the control class.

### Table 2. Normality Test of Post-Test

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Df</td>
</tr>
<tr>
<td>Experimental Class</td>
<td>.141</td>
<td>34</td>
</tr>
<tr>
<td>Control Class</td>
<td>.184</td>
<td>34</td>
</tr>
<tr>
<td>a. Lilliefors Significance Correction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 3. Mann-Whitney Data Post-test

<table>
<thead>
<tr>
<th></th>
<th>Experimental Class</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-test Results</td>
<td>23</td>
<td>45.33</td>
<td>1632.00</td>
</tr>
<tr>
<td>Control Class</td>
<td>21</td>
<td>25.09</td>
<td>853.00</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Test Statistics

<table>
<thead>
<tr>
<th></th>
<th>Posttest Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>258.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>853.000</td>
</tr>
<tr>
<td>Z</td>
<td>-4.161</td>
</tr>
<tr>
<td>Asym. Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>a. Grouping Variable: Class</td>
<td></td>
</tr>
</tbody>
</table>
Likewise, the Mann-Whitney U-Statistic was 258.000, and the Z value was -4.161. The negative Z value infers that the experimental class had significantly favorable post-test results than the control class. Given the 2-tailed significance level of .000, which was less than the normally used alpha value (0.05), it is safe to conclude that the difference between the two groups was statistically significant. In other words, the experimental class’s post-test results were significantly different from the control class’s, with the experimental class showing significant improvement. Hence, an alternate hypothesis (Ha) was accepted, and the null hypothesis (H0) was definitely rejected. At the same time the Peer Assessment Technique is proven to be reliable and effective in teaching writing skills.

3.2 Effective Impact of the Peer Assessment Technique on Students’ Writing Skills

Consequently, the Peer Assessment Technique was implemented for five meetings to teach writing skills and then the evidence of its impact on students’ writing skills was investigated. Students’ writing outcomes were evaluated through a pre-test at the beginning and a post-test at the end of the lesson, with the data was analyzed using SPSS software tested based on the Mann-Whitney test. This illustrates the differences between the experimental and control groups in terms of mean and standard deviation. Notably, since the experimental class had higher mean results and lower standard deviation compared to the control class, indicating that the use of Peer Assessment Technique is likely to have a significant influence on students’ writing skills.

The findings presented in the results of the Mann-Whitney test provide important insights into the effectiveness of the Peer Assessment Technique in teaching writing skills. Further, it has been established that there is a consistent recognition with earlier research by Cacay (2022); Fathi & Khodabakhsh (2019), Meletiadou (2021) & Romadlon (2022) which asserts that the experimental class experienced greater improvement in writing skills as measured by the post-test. Otherwise, the Mann-Whitney U-Statistic of 258.000 and the Z value of -4.161 further support the conclusion that the experimental class outperformed the control class.

Previous studies conducted by Adhiyanti et al. (2018); Li et al. (2020); Mantra et al. (2020) & Mumpuni et al., (2022) were consistently support the result that the negative Z value signifies that the experimental class had significantly more favorable post-test results than the control class. Moreover, the 2-tailed significance level of .000, which was lower than the commonly used alpha value of 0.05, indicates that the observed difference between the two groups was statistically significant. Thus, Haeriyati et al., (2023); Indasari et al., (2019); Mantra et al., (2020) & Meletiadou (2021) reinforced the argument that the Peer Assessment Technique led to a meaningful improvement in the experimental class.

Moreover, these results contribute to the scientific interpretation of the study by providing evidence that the Peer Assessment Technique is reliable and effective in teaching writing skills (Mumpuni et al., 2022). The significant improvement in the experimental class compared to the control class supports the idea that the use of this technique positively impacts writing skills. This interpretation aligns with the original objectives outlined in the Introduction section, which likely aimed to investigate the effectiveness of the Peer Assessment Technique in enhancing writing skills.

Therefore, it was noted that these findings contribute to a more thorough understanding of the implications and generalizability of the research results. The encouraging results show that Peer Assessment Technique encourage students to critically improve their own learning ability and performance and encourages them to have a responsible attitude toward their learning (Kustiani et al., 2020; Prahani et al., 2020; Ramadansur, et al., 2023; Rizki & Fahkrunisa, 2022). Similarly, the research accomplished by Abbas & Fathira (2022); Adhiyanti et al. (2018); Indasari et al. (2019) and Meletiadou (2021) confirm that the Peer Assessment Technique as a very valuable technique that encourages students to think critically about their learning ability and performance. They could manage to reflect on what they have done and this creates a healthy self-awareness of their strengths and weaknesses (Meletiadou, 2021).
On the other hand, as conclusion drawn by (Habiburrohman, 2019; Haeriyati et al., 2023; Li et al., 2020; Meletiadou, 2021; Mumpuni et al., 2022; Ramadansur et al., (2023) and Romadlon, 2022) explain that the Peer Assessment Technique is useful in the context of education as it facilitates students in the development of their social skills through cooperative learning. Similarly, Falchikov, (2007); Johnson & Johnson, 2009; Ramadansur, et al., (2023) & Suryani (2016) propose that during this process, it encourages students to work together with their peers on learning tasks. Therefore, it provides opportunities for them to interact, communicate, and collaborate in achieving shared learning goals. Hence, Peer Assessment Technique not only helps students in developing social skills, but also encourages them to become more independent learners, motivate themselves, and take responsibility for their learning process (Ayu, 2017). This method can play an important role in shaping individuals who are ready to face challenges in their education and career (Indasari et al., 2019; Li et al., 2020; Meletiadou, 2021; Mumpuni et al., 2022).

Moreover, employing Peer Assessment Technique is considered by students as a useful technique in terms of helping them understand the common errors they make in sentence writing as proposed by Abbas & Herdi (2018) and Afriani (2018) as well as how to formulate a correct sentence grammatically (Indasari et al., 2019; Mumpuni et al., 2022; Rizky & Zainil, 2021). By including fellow peers in assessing the quality of their writing, students can receive constructive feedback, identify weaknesses in sentence structure and grammar, and ultimately improve their writing skills significantly (Ayu et al., 2022; Haeriyati et al., 2023; Mantra et al., 2020; Meletiadou, 2021& Rahma et al., 2023).

It was discovered in the adoption of the Peer Assessment Technique to reveal that students have tremendous potential to make valuable contributions within the classroom environment. Through the technique, they are actively able to assess the work or performance of their classmates. However, the benefits are not only limited to students, but also provide valuable support for teachers in providing quality feedback for students’ learning development (Gielien et al., 2010; Indasari et al., 2019; Meletiadou, 2021; Rahma et al., 2023). Hence, the class becomes a means of mutually beneficial feedback exchange.

Interestingly, this Peer Assessment Technique allows students to receive useful feedback, even in a very limited amount of time. This implies that evaluation and learning proceed efficiently, allowing both teachers and students to stay focused on learning despite time constraints. Consequently, this method stimulates an increase in the quality of collaborative learning in the classroom, and promotes the development of deeper critical and analytical thinking skills.

4. CONCLUSION

As a collaborative learning approach that is more student-centered, the Peer Assessment Technique has a good effect on students’ writing skills. Then, from the research, it can be concluded that the Peer Assessment Technique is a technique that is considered to have a notable for its impacts on promoting students’ writing skills. It is evident that the Peer Assessment Technique is not just a tool, but a powerful weapon that enriches students’ writing skills, triggers critical thinking, hones social skills, and paves the way to more productive learning and this technique can be a valuable means for students to receive feedback and identify weaknesses in their writing feedback exchange more effective.

Therefore, the findings galvanize educators in their search for successful teaching strategies, while students feel encouraged to achieve improved writing skills and enjoy a more substantial educational experience. Notably, it has been suggested that this technique is not only benefits students and lecturers by promoting a more efficient and quality-oriented learning environment, but also offers practical guidance for educators and institutions in improving their methods of teaching writing skills through Peer Assessment Technique. Additionally, investigating its applicability across different educational levels, subjects, or student populations could provide a more comprehensive understanding of its utility. Long-term studies assessing the sustained impact of the technique and comparisons with other teaching methodologies could further enrich the literature on effective pedagogical practices.
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