The Effect of PjBL with Oral Corrective Feedback on Student Scientific Article Writing Skills

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Abstract: The purpose of this study was to determine the effectiveness of using the Project Based Learning model integrated with Oral Corrective Feedback in teaching academic writing in tertiary institutions. This form of research uses an experimental methodology and is quantitative in nature. Matching Pretest-Post-Test Control Group Design was used as the research methodology. This research data collection strategy uses tests. The test given is a performance test, in which students make scientific articles to be published in journals. The research data processing technique was SPSS 17. Based on the findings and discussion it can be concluded that the use of the PjBL model integrated with Oral Corrective Feedback is more effective than using the PjBL model alone to teach students academic writing in the field. Indonesian Language and Literature Study Program, Padang State University. The use of this model is one of the innovations in learning based on the latest curriculum by integrating innovative language learning methods in learning in tertiary institutions.


Keywords: Project Based Learning, Oral Corrective Feedback, Writing, Scientific Article, Higher Education
INTRODUCTION

Writing is the most crucial language skill, but it is also the most hardest to acquire since it requires formal teaching in a sequence of educational contexts (Al-hammadi & Sidek, 2015). In addition, writing skills are not acquired naturally like speaking skills but are learned through training (Can & Canbulat, 2019). This skill is very important for learning especially considering that it is a learning mechanism that allows exposure, organization and refinement of ideas and feelings in addition to expressing them (Demirezen, 2019). Writing is used to educate, enlighten, convince, entertain, and reflect upon oneself. Writing involves not only a polished final manuscript, but also routines, abilities, and practices for producing, revising, and editing diverse forms of texts (Khazaal, 2019). This is important in terms of the skills students need to succeed in college (Ahmed, 2010; Graham, Gillespie, & McKeown, 2012; Hasbollah, 2010).

Managing academic writing is one of the most difficult obstacles for college students. This type of writing is typically formal, and students must elaborate on their points within specific discourses (Zaki & Yunus, 2015). Academic writing is necessary for presenting students' arguments in a logical order and reaching conclusions. There will frequently be references to the ideas, thoughts, or studies of other authors who write in this topic, as the authors of this material always engage with each other's works (Khazaal, 2019). These writings are often written about comparing two things, discussing solutions, introducing projects, summarizing information, reporting research or experiments (Aydin & Baysan, 2018).

Academic writing is an objective exposition of scientific study findings (Boyle, Ramsay, & Struan, 2019). It seeks to highlight the contribution of newly conducted research to the scientific community. The intended audience consists of individuals working in relevant fields (Altunkaya & Ayranci, 2020). The characteristics of academic writing that distinguish it from other genres are topic choice, access to information sources, research preparation, thinking, language used, narrative flow (organization of information) and ethics. In addition, academic language has a serious, neutral, terminological, complicated structure in accordance with the language of other types of written expression. Academic writing necessitates a calm, scientific tone. In other words, specific outcomes have been attained by shifting from causes to indefinite decisions (Aydin & Baysan, 2018).

Academic writing is commonly acknowledged to be a vital component of higher education (Chittum & Bryant, 2014). It is necessary that university students have a good level of academic writing and communication in order to be successful and find their academic niche (Al-hammadi & Sidek, 2015). Research demonstrates that the level of students’ academic writing competency has a significant impact on their academic progress and post-graduation success, which supports the need to improve academic writing skills among undergraduates, even in professional programs (Defazio, Jones, Tennant, & Hook, 2010; Saidy, 2015). Modern scholars in all fields must be able to effectively communicate their findings to a variety of audiences and venues, including peer-reviewed journals, conference presentations, practitioners, legislators, and grant funders (Chittum & Bryant, 2014). In addition, college graduates must possess good communication and writing abilities in order to manage daily operations, make choices, and document and report vast quantities of complex information in the workplace (Al-hammadi & Sidek, 2015).

Given the importance of excellent written communication, research indicates that undergraduate students continue to struggle with academic writing skills (Scott, Ulmerkrol, & Ribeiro, 2020). Although expectations
for students' writing skills are high, instructors and researchers from a variety of areas concur that students' actual writing talents are frequently subpar (Chittum & Bryant, 2014). Academic writing is a difficult endeavor that requires a variety of specialized talents. Due to its complexity, academics have identified a number of obstacles that can impede the production of high-quality academic writing (Çelik, 2020).

The lack of student knowledge of the rules of academic writing is the primary issue. Typically, their essays are formatted incorrectly, have grammatical and spelling problems, lack punctuation, lack sentence variety, and generally are poorly ordered and imprecise (Zaki & Yunus, 2015). Second, students fail to establish a clear focus in their writing since they must be more exhaustive in their reasoning when writing academically. Before reaching a conclusion, students must understand the logical procedures; therefore, logical thinking is essential since they must connect ideas appropriately and construct cogent arguments (Lai, 2010).

Thirdly, the absence of feedback on written assignments and the perception that the instructor is uninterested in their development can greatly contribute to writing anxiety in students, resulting in a lack of motivation to complete a given writing project (Rowe, 2011). Current teaching practices do not provide students with sufficient opportunities to practice writing or adequate feedback to improve the quality of their academic writing which can be the main reason for low writing performance (Motlhaka, 2020). In addition, the feedback that language teachers often give only focuses on written corrective feedback which focuses on grammatical correctness for error correction which may not have a positive effect on writing (Canagarajah, 2018; Karim & Nassaji, 2019).

According to numerous studies, the experience of academic writing in teacher education is heavily influenced by students' education, prior writing experiences, and perspectives on becoming teachers (Arneback, Englund, & Solbøkke, 2016). Writing norms for all portions of academic texts and ethical concepts in academic writing should be taught in detail to future instructors in order for them to acquire academic writing abilities (Boyle et al., 2019). One type of academic writing is a scientific article. In addition to preparing a thesis as one of the graduation requirements, at Padang State University (UNP) students are required to prepare scientific articles to be published in journals with ISSN with a minimum status of "accepted". This also applies to Indonesian Language Education students at UNP. Based on this policy, students are prepared to write articles in semester 6 so they can publish articles in journals before graduation. However, students' academic writing ability has not met expectations.

Feedback is a vital indicator of whether or not pupils are progressing in the right direction with their work. In other words, it reinforces and corrects pupils' understanding through a variety of approaches (Yeh, 2015). Based on that, the Corrective Feedback method is used in academic writing activities. Corrective Feedback is about giving feedback, either in the form of positive or negative responses. In other words, it is the process of equipping the learner with knowledge about performance progressively to increase correct student responses and correct incorrect ones (Al-Olimat & Abuseileek, 2015). Students must be able to comprehend what they are learning and what they have just learned as a result of feedback that contains information pertinent to the learning process (Petchprasert, 2012).

Corrective Feedback plays a key role in teaching as it highlights learners' mistakes which will allow them to gradually eradicate those mistakes over a long period of time (Şakiroğlu, 2020). Instructors, as experts, must provide assistance that is not only aimed at
helping students complete the task at hand, but also encourages students to take greater responsibility for the activity (Al-Olimat & Abuseileek, 2015). Thus, if our task is to help students to become independent editors, we should guide them in their efforts to edit their own work rather than giving them the “correct” form (Maawuujav, 2019).

In general, error correction can be direct or indirect; the former refers to the teacher conveying the correct form or linguistic structure to the students and the latter, also known as corrective feedback (CF), refers to the instructions given by the teacher for utterances that contain errors (Ghanizadeh, Amir, & Jahedizadeh, 2020). Feedback is considered as a tool of promoting student motivation and maintaining linguistic clarity in both structural and communicative methods of language training (Al-Olimat & Abuseileek, 2015). Ellis (2009) demonstrates that feedback may be favorable or negative. Positive feedback validates the correctness of the learner’s response to an exercise. Positive feedback is deemed essential in pedagogical theory because it gives learners with affective support and encourages them to continue studying. It appears that Corrective Feedback attracts students’ attention to linguistic forms that occur inadvertently during classes where the primary emphasis is on meaning or communication (Chu, 2011; Öztürk, 2016).

Feedback is considered as a tool of promoting student motivation and maintaining linguistic clarity in both structural and communicative methods of language training (Wang, 2017). Giving students immediate feedback or corrections means that they must assume responsibility for re-editing their writing errors in response to explicit comments they receive from instructors (Aseeri, 2019). This is supported by the statement (Hamouda, 2011) that teachers deliver indirect and selective feedback, whereas students desire immediate and comprehensive corrections. Even though delivering feedback is a complex skill, it is a task that must be performed frequently to keep students apprised of their level and how to advance in terms of expectations and goals (Al-Hazzani & Altalhab, 2018).

Written corrective feedback is the sort of feedback most commonly used in grammar instruction since it focuses on syntactic and lexical mistakes (Balanga et al., 2016). This is also a type of corrective feedback that requires more time and attention from the teacher because this feedback is individual according to the mistakes made by students (Al-Hazzani & Altalhab, 2018). Nonetheless, several students found it challenging to comprehend the teacher’s written corrections, and this did not suit their needs. Consequently, instructors should also attempt to clarify the written corrective comments they provide in students' papers (Wilson, 2012). Based on that, in this study, the Corrective Feedback used is Oral Corrective Feedback (OCF).

In OCF, when correcting mistakes, the instructor/teacher needs to consider whether the correction is pedagogically comfortable (Şakiroğlu, 2020). Therefore, learner preferences are important because they can influence learning behavior and inform instructors about learner perspectives and can subsequently help teach teaching practices in OCF more effectively (Lyster, Saito, & Sato, 2013). In most studies, the literature focuses on teachers as the most common feedback givers because they are the most common interlocutors. Several attempts have been made to clarify the type of feedback they use and their belief in OCF (Kır, 2020). The term ‘Corrective Feedback’ is generally used to correct errors in form not content (Al-Olimat & Abuseileek, 2015). However, this research refers to feedback on form and content in academic writing, especially scholarly articles.

In this study, the Oral Corrective Feedback approach is associated with the Project Based Learning Model. This is based on the Higher Education Curriculum at Padang.
State University which must use the PjBL Model or use the Case Method model. By integrating other methods, providing a novelty that can be done in learning. Each course has its own characteristics, it is not possible for all lectures to use the same learning method or model. By integrating Oral Corrective Feedback can provide an innovation in learning to write students. Based on this, the purpose of this study was to see the effect of using the PjBL Model with Oral Corrective Feedback on the scientific article writing skills of Indonesian language students at Padang State University.

**METHOD**

This form of research employs experimental methodologies and is quantitative in nature. Specifically, a Matching Pretest-Posttest Control Group Design was utilized. In this study, two classes were selected, namely the experimental class (the class given the treatment) and the control class and were given a pre-test beforehand. After that, the experimental class was given a treatment using the PjBL model with Oral Corrective Feedback, while the control class only used the PjBL model. The PjBL model used follows the PjBL syntax (Indriyani & Ramadhan, 2017; Ramadhan, Indriyani, Asri, & Sukma, 2020). After finishing the treatment both classes were given a post-test. This can be seen in Figure 1 below.

![Figure 1: Research Design Matching Pretest—Posttest Control Group](image)

The population of this research is Indonesian Language and Literature Education students class of 2019. The students consist of 5 classes. The sample of this research were two classes selected by purposive sampling technique. This research data collection technique by using a test. The test given is a performance test, in which students make scientific articles to be published in journals. The research instrument uses a test. The research data processing technique is to use SPSS 17 with the following steps. First, do a data normality test. Second, to test the homogeneity of the data. Third, do a Paired Sample T-Test. Fourth, test the Independent Sample T Test.

**RESULTS AND DISCUSSION**

**Results**

This study yielded test scores for the learning outcomes of students based on the findings of pre-test and post-test trials in both groups, namely the experimental group and the control group. The collected research outcomes can be stated as follows. First, describes the descriptive statistics of the data processed using SPSS. The following presents a descriptive statistical analysis of the data in this study in table 1.

<table>
<thead>
<tr>
<th>Table 1. Descriptive data</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviasi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test (Experiment Class)</td>
<td>26</td>
<td>44</td>
<td>66</td>
<td>52.12</td>
<td>5.943</td>
</tr>
<tr>
<td>Post-test (Experiment Class)</td>
<td>26</td>
<td>71</td>
<td>90</td>
<td>81.08</td>
<td>5.098</td>
</tr>
<tr>
<td>Pre-test (Control Class)</td>
<td>26</td>
<td>42</td>
<td>60</td>
<td>49.54</td>
<td>4.501</td>
</tr>
<tr>
<td>Post-test (Control Class)</td>
<td>26</td>
<td>61</td>
<td>78</td>
<td>69.77</td>
<td>4.448</td>
</tr>
</tbody>
</table>

The difference between the average learning results of the experimental class and the control class may be seen in Table 1. To ensure that there are significant differences, it is necessary to carry out statistical tests on student learning outcomes with the help of SPSS. Second, testing the trial data's normality. This study used the Shapiro-Wilk test with a significance level of 0.05 to
examine the normality of the data. After processing data with the SPSS application, the output display results may be shown in Table 2.

### Table 2. Test of normality

<table>
<thead>
<tr>
<th>Class</th>
<th>Statistic</th>
<th>Kolmogorov-Smirnov df</th>
<th>Sig.</th>
<th>Statistic</th>
<th>Shapiro-Wilk df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>1</td>
<td>.118</td>
<td>26</td>
<td>.200*</td>
<td>.942</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.151</td>
<td>26</td>
<td>.129</td>
<td>.959</td>
<td>26</td>
</tr>
<tr>
<td>Post-test</td>
<td>1</td>
<td>.110</td>
<td>26</td>
<td>.200*</td>
<td>.975</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.133</td>
<td>26</td>
<td>.200*</td>
<td>.944</td>
<td>26</td>
</tr>
</tbody>
</table>

The significance of the score data for the four data, namely experimental class pre-test data (0.154), control class pre-test data (0.367), experimental class post-test data (0.744), and post-test control class data (0.163), may be determined using the Shapiro Wilk test. On the basis of these statistics, it can be stated that the sample is normally distributed with a significance level greater than 0.05. By providing the significance data, it is possible to deduce that both the pre-test and post-test data samples for both classes are regularly distributed. Thirdly, evaluate the trial data's uniformity. A homogeneity test was performed to assess if the two populations share the same variance. This study's homogeneity test utilized the Levene test with the SPSS program rocks. In Table 3 you will find the results of the homogeneity test.

### Table 3. Test of homogeneity

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on Mean</td>
<td>2.463</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Based on Median</td>
<td>2.441</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Based on media and with adjusted df</td>
<td>2.441</td>
<td>1</td>
<td>48.610</td>
</tr>
<tr>
<td>Based on trummed mean</td>
<td>2.377</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on Mean</td>
<td>.631</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Based on Median</td>
<td>.526</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Based on media and with adjusted df</td>
<td>.526</td>
<td>1</td>
<td>49.565</td>
</tr>
<tr>
<td>Based on trummed mean</td>
<td>.627</td>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>

According to Table 3, the significant value of the average pre- and post-test data is 0.123 and 0.431, respectively. If the significance level or probability value is greater than 0.05, it is possible to say that the population has same or homogeneous variance. The fourth test is the Paired Sample T Test. This test determines whether the difference between the means of two paired samples is significant. In this study, the results were used to assess if there were any variations in learning outcomes following the integration of the PjBL model with Oral Corrective Feedback. In order to answer this question, a Paired Samples T-Test was performed on the pre-test and post-test data for the experimental class (PjBL integrated with Oral Corrective Feedback). Then, the pre- and post-test data for the control group are compared (PjBL). The trial outcomes are shown in Table 4.
### Table 4. Paired Sample Test

<table>
<thead>
<tr>
<th></th>
<th>Paired Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2 tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error</td>
<td>95% Confidence Interval of the Difference</td>
</tr>
<tr>
<td>Pair 1</td>
<td>Pre-test-post test (Experiment Class)</td>
<td>-28.692</td>
<td>3.105</td>
<td>.609</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Pre-test-post test (Control Class)</td>
<td>-20.231</td>
<td>5.757</td>
<td>1.129</td>
</tr>
</tbody>
</table>

On the basis of the output pair 1 and the value of Sig. (2-tailet) of 0.000<0.005, it can be stated that the average student learning outcomes for the experimental class differ. Using the result of pair 2 and the value of Sig. (2-tailet) of 0.000<0.005, it is possible to deduce that there is a difference in the average student learning outcomes for the control group. Fifth, determine if there is a difference in the post-test means of the two unpaired samples (control class and experimental class). This test's primary requirement is that the data be regularly distributed and homogeneous (not absolute). The conclusion reached based on the findings of the study of the normality test and the homogeneity test is that the data are normally distributed and homogeneous. The results of the average difference test in this study can be seen in table 5.

### Table 5. Independent Sample Test

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>T-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>Equal variance not assumed</td>
<td>8.522</td>
</tr>
</tbody>
</table>
Based on the test results obtained sig. (2-tailed) of 0.000 <0.05, it can be concluded that there is a difference in the average student learning outcomes using the PjBL model integrated with Oral Corrective Feedback compared to using the PjBL model alone.

**Discussion**

Corrective Feedback is one of the main tools used to improve English learning and teaching through helping students correct their mistakes (AbuSeileek & Abu Sa’aleek, 2012). It is an important part of language learning and teaching that influences student learning and achievement, while also helping teachers and their students achieve instructional goals in learning and teaching (Petchprasert, 2012). One of the primary roles of a language instructor is to provide feedback on student papers so that students may determine whether or not they are proficient writers and whether or not their pedagogical techniques satisfy students' expectations. Corrective Feedback informs students of their writing performance and transforms them into proficient, critical authors (Wang, 2017).

Based on the results of the study showed that the use of Oral Corrective Feedback was effective for use in learning to write student articles. Previous research has proven this a lot, however, previous research is more dominant using Oral Corrective Feedback in learning speaking skills and Written Corrective Feedback in learning writing. In this study, the authors used Oral Corrective Feedback because it would make it easier for teachers to explain content, content, and language errors in student scientific articles.

Ataman & Mirici (2017) examined the association between corrective feedback through workfollo-based assignments and the improvement of writing skills among English language learners. 64 B1-level students at a foundation university in Ankara, Turkey, participated in the study. The results of the study show that Corrective Feedback is effectively used in learning to write. In addition, students stated that getting corrective feedback was beneficial to them because they were able to learn from their mistakes and were more motivated towards learning. Furthermore, Argüelles, Méndez, & Escuder (2019) The results of a qualitative case study on the attitudes of college-level English as a foreign language instructors toward Oral Corrective Feedback were disclosed. These findings imply the need for greater corrective feedback training and practice grounded on theory. This is due to the fact that language correction dominates the use of this strategy.

Maawa & Cruz (2019) the effectiveness of remedial and corrective comments in enhancing students' English proficiency was evaluated. The outcomes of the study indicate that Corrective Feedback promotes learning. This approach must be prioritized since it can be included into remedial teaching tactics when teachers conduct remedial classes. This will strengthen their instruction and provide tangible methods for enhancing students' English ability. Accordingly, Khaki & Tabrizi (2021) investigated EFL learners in a kind of process-product approach in writing and investigated the possible effects of direct and indirect teacher corrective feedback at four English language institutes in Isfahan, Iran. The results of his research show that a process-based approach through providing direct feedback is more effective than other teaching writing approaches.

The use of Oral Corrective Feedback is supported by research conducted (Yakışık, 2021). She investigated EFL students' preferences and emotions about verbal corrective feedback with a special focus on gender and grade level in secondary education in Turkey. More than half of high school EFL students are concerned about making errors in class; yet, the majority of students agreed with the necessity to embrace OCF and had positive feelings about receiving direct feedback from their teachers. On the basis of some of these research, OFC can be utilized as an alternative in language acquisition,
particularly in the development of writing abilities.

CONCLUSION
In the Indonesian Language and Literature Education Study Program at Padang State University, utilizing the PjBL model in conjunction with Oral Corrective Feedback is more effective than using the PjBL model alone for teaching students to write scientific papers. Even though colleges have controlled the usage of learning models, professors can alter learning models by adopting alternative models, such as Oral Corrective Feedback.

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