

## Integrating Self-Assessment in Learning Vocabulary: A Quasi Experimental Research at a Vocational High School

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### Abstract

This study examines the lack of English vocabulary in students, especially in nouns and verbs. This study aims to analyze the effect of self-assessment method on Grade XI students of SMK Negeri 1 Mepanga. The research method used was quasi-experimental using pretest and posttest. The research sample consisted of 71 students who were divided into experimental group (34 students) and control group (37 students) as samples using total sampling technique. Data analysis using the Mann-Whitney test (SPSS 24). The Mann-Whitney test is used to compare two independent groups with ordinal or interval data that are not normally distributed. The test results show that the test statistic is 0.001, which is smaller than 0.05, meaning that the null hypothesis is rejected, and the alternative hypothesis is accepted. It can be concluded that there is a significant difference between the control class and the experimental class. This finding shows that the self-assessment method can improve students' English vocabulary. This research contributes to the development of learning strategies that can be applied to build higher order thinking skills in EFL students. The results of this study provide valuable insights for students, teachers, and future researchers.

*Keywords: self-assessment, vocabulary mastery, language learning.*

### INTRODUCTION

Vocabulary plays an important role in English language learning, especially in the era of globalization as it requires the development of vocabulary skills to understand and interpret written texts, such as letters, articles, etc. Thus, they can communicate fluently with others without difficulty. Furthermore, one will be able to understand and comprehend others in any situation (Sari et al., 2024). Most importantly, all students need vocabulary to easily master English. It is impossible for students to use English better if their vocabulary acquisition is low. According to Richard and Renandya (2003:255) said that, without an extensive vocabulary and strategies for acquiring new vocabulary, learners often achieve less than their potential and may not take advantage of the language learning opportunities that surround them, such as listening to the radio, listening to native speakers, using the language in different contexts, reading or watching television. By having a rich vocabulary or improving vocabulary acquisition, students can use English easily.

In addition, the objective of learning the English subject as stated in the 2013 curriculum demands students to be able to communicate effectively. To gain that purpose, students must be able to speak, listen, read, and write. As a result, students need to obtain a lot of vocabulary since

vocabulary is generally considered as one of the language components which help students to develop their competency in communicating and their language skills.

However, many students find that learning vocabulary is tough or challenging for several reasons. One of the primary challenges in vocabulary acquisition is the vast number of words that learners must master. Nation and Anthony (2013) suggests that a vocabulary of 8,000-9,000-word families is necessary for comprehension of authentic English texts. This daunting number often overwhelms students, leading to decreased motivation and engagement in vocabulary learning activities. The researcher found the same problem when interviewed the English teacher of SMK Negeri 1 Mepanga. The English teacher from that school said that students still lack vocabulary, incorrect pronunciation, and incorrect spelling which makes it difficult for students to write speak and read in English.

Furthermore, learning vocabulary in the context of English as a foreign language (EFL) is a challenge for most learners. Several studies have revealed the challenges faced by learners in learning vocabulary. For example, (Jannah et al., 2023), The findings show that students have difficulty in selecting words that have the correct meaning rather than identifying synonyms and antonyms. This study confirms the problems students face in learning vocabulary, increases students' awareness of the importance of learning English vocabulary, and future researchers can explore more effective vocabulary learning strategies as well as encourage teachers to conduct learning activities that can improve students' vocabulary acquisition. Machfudi and Afidah (2022), The results of this study show that: first, the difficulties experienced by students are that students have difficulty in translating words or sentences in English into Indonesian as well as Indonesian into English. Students also have difficulty in understanding the meaning of words, part of speech, pronunciation, spelling mistakes, and remembering or memorizing English vocabulary. Based on research experience, students have difficulty identifying parts of speech in sentences, spelling mistakes, using vocabulary in sentences and pronunciation. This complexity often leads to superficial word knowledge, where students can recognize words but fail to use them appropriately. Lack of authentic language exposure is also a considerable hurdle. In the context of EFL in Indonesia, students have limited opportunities to discover and use English vocabulary outside the classroom. This lack of real-world application makes it difficult for students to remember their newly learned words and understand their practical use. Therefore, finding effective ways of teaching English vocabulary is crucial. There are many ways to improve students' vocabulary, one of which is by using the self-assessment method. Self-assessment is a formative assessment process in education in which students evaluate their own work against specific criteria or standards in which students reflect on the quality of their work, assess the extent to which their work reflects explicitly stated objectives or criteria, and revise it. The emphasis here is on the word formative: Self-assessment is carried out on drafts of work in progress to inform revision and improvement Mohamed Jamrus and Razali (2019), involving students in the learning process through several techniques mentioned above is recommended. The current curriculum used in Indonesia school context does not only suggest student-centered learning in the teaching-learning processes, but also recommends students' involvement in assessment processes. Several practitioners, such as Boud and Filhokiv; Topping, 2009; Thamrin & Fahri, 2023; Thamrin et al., 2024, claim that integrating students in either self or peer assessment can be a powerful learning strategy to help students improving their academic performance and learning outcomes. Therefore, this present study aims to integrate students in assessment while the teaching-learning in the class, particularly involving students in self-assessment.

Based on the above reasons, the researcher is interest in investigating the contribution of self-assessment in vocabulary learning. The researcher wants to apply it to senior high school students at SMK Negeri 1 Mepanga, especially eleventh grade students. The researcher chose this school because based on the experience of the English teacher there, the students are still lacking in vocabulary mastery. The reason the researcher chose second grade students is because

at this age, students are usually more able to reflect critically and provide deeper insights into their learning experiences or other phenomena being studied. So, the researcher wants to conduct a study, with the title 'Integrating self-assessment in learning vocabulary: a quasi-experimental research at a vocational high school. The researcher formulates the hypothesis of the research as follows:

1. Alternative Hypothesis ( $H_a$ ): There is significant improvement of contribution of self-assessment in learning vocabulary of eleventh grade students at SMK Negeri 1 Mepanga.
2. Null Hypothesis ( $H_0$ ): There is no significant improvement of contribution of self-assessment in learning vocabulary of eleventh grade students at SMK Negeri 1 Mepanga.

## METHODS

This research was conducted at SMK Negeri 1 Mepanga, to answer the research question to prove the research hypothesis test researcher used a quantitative approach with a quasi-experimental design. Quantitative research approaches are widely used in various fields, including Library and Information Science (LIS), to analyze numerical data and draw generalizations from larger populations Vijayendra & Fantone, (2023). Data will be collected using pre-test and post-test. This study focused on integrating self-assessment in learning vocabulary.

### Research design

In conducting the study, the researcher used an experimental design. According to Curtis et al (2022) Experimental design is essential for conducting rigorous scientific research. Researchers used a quasi-experimental research design. The quasi-experimental design is a valuable tool for strengthening causal inferences in a variety of research contexts Baldwin, J. et al (2023). There are two groups: an experimental group and a control group. Both groups are given a pre-test and post-test. The experimental group was given treatment (X) using self-assessment, while the control group was not given treatment (X). In conducting this study, the research used the design formulated by (Cohen et al., 2018:407) which describes this research design as follows:

**Table 1: pretest and posttest design**

	Pre-test	Treatment	Post-test
Experimental	T1	X	T2
Control Group	T1		T2

### Research participants and Sampling Procedures

The population of this study is 71 students of Grade XI SMK Negeri 1 Mepanga. Population in research refers to the entire group of individuals or items that are the focus of research. Population is the target group from which a researcher selects a sample to draw conclusions about the larger group. Population is an important concept in research because it helps define the scope and generalizability of research findings (Dresen et al., 2022). Details of students can be seen in the table below.

**Table 2: Distribution of Population**

No.	Class	Number of Students
1	XI AKL A	37

2	XI AKL B	36
<b>Total</b>		<b>71</b>

The researcher chose to take samples using total sampling. Total sampling is a sampling technique that uses all members of the population as research samples. This technique is often used when the population studied has a small number, usually less than 100 people, or when research wants to produce generalizations with a very small error rate. (Nyimbili, 2024) . The researcher selected the experimental and control class based on the pre-test score; the lowest score become the experimental class and the highest score become the control class. The sample of the research to be conducted is 71 students from two classes: XI A with 37 students and XI B with 34 students.

### Data Collection

There are two parts to collecting the data for the study: Pretest and Posttest. When implementing the self-assessment method, researchers used a standardized assessment guide. This guide serves as a reference to ensure all students in the treatment class have a same understanding of the aspects to be assessed. To provide a more detailed picture, the researcher presents the assessment guide table as follows:

**Table 3: Guideline**

No	Statements	Yes	No	Explanation
1	My sentence has a noun as a subject or object.			
2	My sentence has a verb.			
3	The spelling of the word is correct.			

### Interventions

The intervention applied in this study was self-assessment. The learning process was conducted through steps involving individual treatment and assignments. The main intervention provided was the provision of a guide to assist students in identifying English vocabulary. Experimental group: Students who will receive the intervention, which is self-assessment to improve students' English vocabulary mastery. Control group: The control group is likely to receive the traditional learning method without self-assessment, although this is not mentioned in this description. This process is conducted in six learning sessions, where students are given materials after which students are given tasks and worksheets that will be used as benchmarks to fill in the guideline, the assessment of which is done by the students themselves. Thus, this self-assessment intervention makes learning more effective, students can develop their English vocabulary.

### RESULTS, FINDINGS, AND DISSCUSION

Before giving treatment, researcher gave a pretest to the experimental group and control group. The difference was that in the control group, the researcher did not give any treatment. The control group was taught using traditional methods, with no self-assessment activities. The pre-test consisted of 10 multiple choice questions and 10 fill-in questions, which included material related to nouns and verbs. In presenting the data, the researcher divided it into two parts, the first is the pretest results in the experimental group and the second is the pretest results

in the control group. Based on these results, the data can be described in the form of mean, maximum value, minimum value, and standard deviation, all of which are calculated using SPSS 24. The complete results can be seen in the following table:

**Table 4: Descriptive of Pretest**

No	Class	Mean	Minimum	Maximum	Std Daviation
1	Experimental	43.68	10	90	17.070
2	Control	50.68	20	95	20.822

Based on the table above, the mean pre-test score in the experimental class is 43.68. The maximum score of the experimental group was 90 and the minimum score was 10. Then the standard deviation of the experimental group was 17.070. Meanwhile, the mean score of the control group was 50.68. The maximum score of the control group was 95 and the minimum score was 20. Then the standard deviation of the control group was 20.822. Overall, the control group had a better mean score on the pre-test compared to the experimental group. However, the experimental group showed more variation in their scores, meaning that some individuals performed much better than average, while others performed much worse. These differences in performance and variability may help explain the effects of the different conditions or interventions applied to each group and could be useful for further investigations into the factors that influence student learning outcomes.

After conducting the treatment in the experimental class, the researcher gave a posttest. Similar to the pretest, the posttest also involved verbs and nouns, but the questions given were the same as the pretest. In presenting the data, the researcher divides it into two parts, the first part is the posttest results in the experimental group, and the second part is the posttest results in the control class. Based on these results, data can be described regarding the mean, maximum value, minimum value, and standard deviation, all of which were calculated using SPSS 24. The complete results can be seen in the following table:

**Table 5: Descriptive of Posttest**

No	Class	Mean	Minimum	Maximum	Std Daviation
1	Experimental	77.79	20	100	16.569
2	Control	68.27	25	100	22.058

Based on the table above, the mean score of posttest in the experimental group was 77.79. The maximum score of the control group was 100 and the minimum score was 20. Then the standard deviation of the group was 16.569. Meanwhile, the mean score of the control group was 68.27. The maximum score of the posttest in the control group was 100 and the minimum score was 25. Then the standard deviation of the control group was 22.058.

Overall, the experimental group performed significantly better than the control group on the posttest, with higher mean scores. This suggests that the experimental intervention may have had a positive impact on student performance. In addition, the higher mean score in the experimental group suggests that most students in this group showed marked improvement compared to their pretest results, while the control group did not make significant progress. The variation in scores in the experimental group further supports the idea that this self-assessment method is effective, as it most likely helped more students achieve higher levels of success.

**Table 6: Test of Normality**

No	Class	Indicator	Sig.	Normality
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				Yes	No
1	Pretest Experiment	Sig > 0.05	0.209	✓	
2	Posttest Experiment	Sig < 0.05	0.001		✓
3	Pretest Control	Sig > 0.05	0.032	✓	
4	Posttest Control	Sig > 0.05	0.020	✓	

Based on the results of the normality test using SPSS 24, it can be seen that the significance value (Sig) for the Experiment Pretest is 0.209. Because the value of sig. 0.209 > 0.05, then the data is normally distributed. The sig value for the Experiment Post-test is 0.001, and because the sig value is 0.001 < 0.05, the data is not normally distributed. Then, in the control class, the sig value for the Pretest is 0.032. Because the sig value is 0.032 > 0.05, the data is normally distributed. The sig value for the Control Posttest is 0.020, because the sig value is 0.020 > 0.05, the data is normally distributed. Based on the Shapiro-Wilk test results above, it can be concluded that the research data is normally distributed, except for the Experiment Posttest results. This happens because of data transformation problems. If there is a large score change between the pretest and posttest, this can cause an abnormal distribution shift.

**Table 7: Test Statistics**

No	Class	Indicator	Asymp. Sig. (2-tailed)
1	Pretest and Posttest of Experiment and Control class	Sig < 0.05	0.001

Based on the ‘Test Statistics’ output in the Mann-Whitney test above, it was found that the Asymp. Sig (2-tailed) value was 0.001, which was less than 0.05. Therefore, based on the Mann-Whitney test decision, it can be concluded that the null hypothesis was rejected and the alternative hypothesis was accepted. Thus it can be said that there was a difference in learning outcomes between class AKL B (experimental) and class AKL A (control). Because there was a significant difference, the research question could also be answered, namely “There was significant improvement of contribution of self-assessment in learning vocabulary of grade eleventh at SMK Negeri 1 Mepanga”.

## DISCUSSION

Based on the pretest results of AKL A class have a mean score of 50.68 while AKL B class is 43.68 with the maximum score AKL A class and AKL B class (95-90) and minimum score (20-10). Because researcher use total sampling which means AKL A class becomes the control class and AKL B class becomes the experimental class because class AKL B has a lower score than AKL A. Based on the data results above, there is a difference in the mean posttest score between the experimental and control classes. The mean posttest score in the experimental class was 77.79, higher than the control class which obtained a mean score of 68.27. The statistical description shows a considerable difference. The maximum score obtained by the experimental class on the pretest and posttest was 90 to 100, while the control class had a maximum score of 95 to 100 on the posttest. This can be seen from the increase in student scores



on the pre-test and post-test of the experimental group. In other words, the results of this study have answered the research question and are directly proportional to the hypothesis. After analyzing the data, the researcher proved that self-assessment could improve students' vocabulary of eleventh grade students of SMK Negeri 1 Mepanga.

General challenges found in previous research by Duque & Medina, (2017), include difficulties in identifying subjects and objects, difficulties in identifying nouns and verbs. The problem of sentence creation can be addressed by self-assessment, which makes it possible for students to think critically and independently. In this process, students review their own created sentences and provide feedback on any errors. Self-assessment helps students actively discover new vocabulary, identify, and understand the meaning of the words they write, such as choosing the right noun to be the subject or object and choosing the right verb. In addition, through this activity, students not only correct errors directly but also deepen their understanding of sentence structure and the proper use of verb and noun forms. The success of this approach is evident from the positive results observed in this study, which show that self-assessment not only improves students' ability to identify and correct errors, but also promotes deeper understanding through self-assessment activities. Some other challenges were first, students took a long time to fill in the self-assessment, because this activity was new to them. Second, they filled in the test took a long time because of the many new vocabulary they found. Because of this, most students had low pre-test scores but after being given the treatment, their vocabulary increased rapidly so that most students had good post-test scores.

The analysis using Mann-Whitney showed a Sig. value of 0.001 which is smaller than 0.05, meaning that the alternative hypothesis ( $H_a$ ) is accepted. Indicates that there is a significant difference in learning outcomes before and after being given treatment using the self-assessment method. It is concluded that self-assessment has a significant influence on student learning outcomes in English vocabulary subjects. Students showed a positive response, became more confident and able to think critically. This is in line with research conducted by Herrera et al., (2022) and Widiartini & Sukerti, (2023), who found that experimental group students who received self-assessment and teacher assessment outperformed control group students who only received teacher assessment in terms of all indicators. According to (Moqbel, 2018) findings from other researchers supporting this study reveal that self-assessment has several benefits for English language learners and that learners see it as beneficial and advantageous for students. Based on this finding, the researcher relates this finding to previous studies by Herrera et al., (2022), Widiartini & Sukerti, (2023), Duque & Medina, (2017). All these studies reported that the use of self-assessment can improve students' knowledge, particularly in English vocabulary. This study also provided evidence that the use of self-assessment can improve students' English vocabulary knowledge among Grade XI students of SMK Negeri 1 Mepanga. Based on these results, it can be concluded that self-assessment is effective for the teaching and learning process.

## CONCLUSION

Based on the findings of the study, it can be assumed that the findings of this study reveal that self-assessment shows significant effectiveness in English vocabulary learning of eleventh grade students at SMK Negeri 1 Mepanga. In addition, the use of self-assessment helps students learn from their own mistakes, thus encouraging a more efficient learning experience of critical thinking. It allows students to give and receive feedback, which improves their understanding of the material. Referring to the Mann-Whitney test results in the previous chapter, it is concluded that the significance value is  $0.001 < 0.05$ . This suggests that vocabulary learning is better when using the self-assessment method, especially for Grade XI students of SMK Negeri 1 Mepanga.

Nevertheless, although research shows that self-assessment can improve vocabulary knowledge, there are also some difficulties. One of the difficulties found during the study was

that students took time to fill in the feedback for themselves as they were not familiar with this activity. Therefore, further guidance is needed to fill in the feedback so that the results are in line with the guidelines.

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