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Improving Student's Technical English Vocabulary Using Readlang Platform at State Polytechnic of Fakfak

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ABSTRACT

Vocabulary is an essential element in learning English which can help students to express their ideas both orally and in writing. However, students at Fakfak State Polytechnic still have limited vocabulary, especially technical English vocabulary. They are difficult to understand the operational terms in English. This study aims to determine whether the use of Readlang platform can improve technical English vocabulary mastery at Informatics Management students in Fakfak State Polytechnic. This research was conducted in one class and applied an experimental research using pretest and posttest group design. The results showed that the students' mean score increased from 40.28 to 55.78. The hypothesis has been analyzed at a significant level of 0.05, and the results show that the t-value is 8.829 and the sig.2-tailed is 0.000. This means that the alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected, which means that Readlang platform can improve the students' technical English vocabulary. In addition, the questionnare results about students' perception after using Readlang shows that the majority of students agreed that Readlang platform can increase the students' enthusiasm in learning vocabulary (92%) and is also effective in helping to remember vocabulary (89.2%), and more importantly is easy to use (96 %).

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INTRODUCTION

Vocabulary is one of the important elements that cannot be separated in learning English. Vocabulary is a number of words and these words are used as a language engine to express a thought both orally and in writing (Alqahtani, 2015). Vocabulary is a basic component that must be mastered by students in order to develop 4 other language skills such as; listening, speaking, reading, and writing (Cameron, 2021). To having good English skills, learners must have sufficient vocabulary.

However, students who take a certain major in vocational colleges, require more effort to master vocabulary. Sometimes, there are some English vocabularies in the Engineering Department which turn out to be different meaning when translated into Indonesian. This is called scientific vocabulary or technical vocabulary, which is a word or combination of words that expresses the meaning of a concept, process, condition, or characteristic that is unique to a particular field. That is why, English subject that is taught to engineering students is ESP (English for Specific Purposes). ESP is an approach to learn English whih is different from general English (Robbinson, 1990). ESP refers to an English learning that is oriented to the special needs of learners according to the field of science and work. The aim of ESP is to be able to master English in the field that they are studying. ESP is generally used in foreign language teaching for certain uses in certain fields of science and profession. This purpose is generally understood as a benefit in the role of English as a means of communication both oral and written (Yusuf, 2017).

Fakfak State Polytechnic is one of the vocational colleges, where Technical English course is taught as a general subject to all departements. However, some students at State Polytechnic of Fakfak, especially Informatics Management Department, still have a limited technical vocabulary. Sometimes, they cannot understand the operational terms of informatics in English and they have difficulty to explain technical things according to their field. This means that, lecturers need to use effective media that can improve technical vocabulary mastery.

In today's digital era, technology has an important role in the world of education. According to Clark (2013), the use of technology is relevant for students and provides connections that will be very useful in learning. In addition, the use of appropriate media in learning can also increase the motivation and interest of students in learning (Magfirah, 2019). This has been proven by research that has been carried out by Ajisoko (2020) who found an increase in English vocabulary mastery at University of Borneo students using Duolingo application. In the current technological era, the use of technology to improve vocabulary mastery is increasingly widespread and more efficient in learning (Nuriansyah, 2020; Mansur & Fadhilawati, 2019; Santosa & Andriyadi, 2019). Likewise, the research conducted by Hasan et al (2019), she found that the use of information technology can affect student academic performance and affect the learning process and have an impact on student academic performance. This is in line with Magfirah (2020) which says that one way to attract students' attention in learning is to use information technology in learning.

Based on research that has been conducted previously, the average use of technology in improving English vocabulary shows significant results. Therefore, the purpose of this research is to implement the use of Readlang platform to increase technical English vocabulary of Informatics Management students at State Polytechnic of Fakfak. Readlang is one of the platforms used to learn new languages. Readlang is a web application that can be accessed through Google search that helps students in understanding the reading text of a foreign language. Readlang has over forty-five different languages to learn including Spanish, German, Russian, English and French, etc. Each language consists of several chapters and each chapter also has many options which help to learn in a fun way. Reading the text accompanied by the available translations of words and phrases. This platform also has exercises in the form of flash cards that can help learners in remembering vocabulary lists in reading text (readlang.com). The use of the Readlang platform is quite simple and easy to use and can be accessed anywhere with an adequate internet connection, either through smartphones or laptops. Thus, the author's consideration in chooseing the Readlang platform because no previous research has examined the use of this platform in improving vocabulary.

RESEARCH METHODOLOGY

This study uses an experimental research methodology. According to Yusuf (2017) experimental research is the only type of research that is accurate compared to other types of research, in determining causal relationships. The research design used is The One-group Pretest Posttest design

(O1 X O2), which is one of the Pre Experiment Research designs which in principle only uses one group. So that in this type of research there is no control group.

The subjects of this study were 28 students of class 2A in the fourth semester at Informatics Management Departement in State Polytechnic of Fakfak, West Papua. The research instruments were a test (pretest and posttest) and a questionnaire. Overall, students were taught to comprehend the text on the Readlang platform and do vocabulary exercises according to the reading text given for around 8 meetings of English subject. The reading topics that were given to the students were about information technology which contains technical English vocabulary. At the first meeting, students' technical English vocabulary was measured by pre-test before they learned vocabulary through the Readlang platform. This test contains 100 technical English vocabularies that they must understand the meaning. After that, they were taught by using platform Readlang for 6 meetings. The reading text given on the Readlang platform is about the scope of informatics engineering. In total, there are 6 reading texts that must be completed at each meeting along with a quiz (flash cards) on the technical vocabulary of the reading texts. Then, at the last meeting, post-test was conducted to measure the increase in students' technical English vocabulary after using the Readlang platform using the same test instrument as the pre-test. If the score from the post-test is higher than the pre-test, it indicates that there is an increase in students' vocabulary and the use of Readlang can be said to be effective as a medium in teaching vocabulary.

This research instrument is valid and reliable. The validity of this research is construct validity and the reliability is inter-rater reliability. After collecting the data, the researcher analyzed it to find out whether there was an increase in vocabulary achievement or not after the action. In analyzing the data, the researcher used a t-test to determine the increase in students' technical vocabulary. T-test or statistical test is used to test the truth or falsity of the hypothesis proposed by the researcher in differentiating the average in two populations (Ghozali, 2016). If the significance value of t test > 0.05 then H_0 is accepted and Ha is rejected. This means that there is no influence between the independent variables on the dependent variable. If the significance value of t test < 0.05 then H_0 is rejected and Ha is accepted. This means that there is an influence between the independent variables on the dependent variable. In other words, H_0: there is no significant increase in students' technical English vocabulary skills if alpha (α) is greater than 0.05. Meanwhile, Ha: there is a significant increase in students' technical English vocabulary if the alpha (α) is less than 0.05.

Next, the researcher distributed questionnaires to determine student perceptions after using Readlang. A questionnaire with a Likert scale will be used in this study and consists of 11 questions containing the interests of students, Readlang's strengths and weaknesses. The calculation of the questionnaire was carried out using a Likert scale consisting of Strongly Agree (SS) with a value scale of 5, S (agree) with a value scale of 4, N (neutral) with a value scale of 3, TS (disagree) with a value scale of 2, STS (very disagree) with a score scale of 1. Students completed the questionnaire at the last meeting after the post-test was carried out.

RESULTS AND DISCUSSIONS

After data collection was collected, the researchers conducted data analysis using SPSS 22 version. The results of data analysis showed that there are differences or improvements in the technical English vocabulary of Informatics Management students after learning vocabulary using the Readlang platform. This is proved by the increase in the average score (mean) of students' technical vocabulary from 40.28 at the pretest to 54.78 at the posttest. There was a significant increase about 14.50, as shown in table 1.

Table 1.
Mean Score Results

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	40.2857	28	12.14681	2.29553
	Post-test	54.7857	28	13.27587	2.50890

In addition, to calculate the average pretest and posttest scores, the author also conducted t-test, namely paired sample t-test to test the hypothesis in this study. This test is used to determine whether there is a true difference in the mean of two paired independent samples. The meaning of pairs is the data in the second sample is a change or difference from the data in the first sample. In this case, to find out whether there is a difference or increase in students' technical English vocabulary skills at the pretest and posttest. The hypothesis criteria in this study are H_0: there is no significant increase in students' technical English vocabulary skill if alpha (α) is greater than 0.05. While Ha: there is a significant increase in students' technical English vocabulary skill if alpha (α) is less than 0.05.

Table 2.
T-test Results

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-test - Post-test	-14.50000	8.69014	1.64228	-17.86968	-11.13032	-8.829	27	.000

Based on the results of the t-test in the table 2 above, it can be seen that the t-value is 8,829 with a probability value/sig. 0.000. Therefore, the value of sig. 0.000 < 0.05, then H_0 is rejected and Ha is accepted, which means that the students' technical English vocabulary skill before and after using the Readlang platform are not the same/different. In this case, there is an increase in students' technical English vocabulary skill after using Readlang platform.

Next, the researchers conducted a feasibility test for the Readlang platform to students. The feasibility test was carried out to determine the user response about Readlang platform. The distribution of questionnaires was carried out to 28 respondents consisting of students from class 2A at the fourth semester at Informatics Management Departement. The number of items in the questionnaire contains 11 questions. In each statement, it has 5 ratings, namely SS (strongly agree) with a value scale of 5, S (agree) with a value scale of 4, N (neutral) with a value scale of 3, TS (disagree) with a value scale of 2, STS (strongly disagree) with a value scale of 1, this value scale is used to determine the percentage of calculation results using a Likert scale.

Table 3.
Questionnaire Results

Soal	Responden					Jumlah skor
	SS	S	N	TS	STS	
P1	8	15	5	0	0	115
P2	11	15	3	0	0	124
P3	12	8	8	0	0	124
P4	15	9	4	0	0	123
P5	13	10	5	0	0	120
P6	17	7	4	0	0	125
P7	12	12	4	0	0	132
P8	14	8	6	0	0	120

P9	15	7	6	0	0	121
P10	18	9	1	0	0	129
P11	24	3	1	0	0	135

Table 3 shows the results obtained from the questionnaire regarding students' perceptions after using Readlang platform. Overall, the majority of respondents think that Readlang is useful in learning vocabulary. This is proved by the high percentage of the 11th questionnaire point regarding to the effectiveness of Readlang in remembering vocabulary and its meaning, which is 96.5%. Then, at point 6 regarding the ease of use of Readlang as many as 89.2% of respondent state SS (Strongly Agree), as well as in point 9 states that Readlang is quite interactive and interesting to use as many as 92% answer SS (Strongly Agree). The lowest percentage is at point 1 (82 %), which is about the ease of the material. This is considered reasonable because students just used this platform and were only limited to seeing the reading material provided in this research process which only focuses on the theme of information technology.

CONCLUSION

After the implementation of Readlang platform in the technical vocabulary learning for 6 meetings, it can be concluded that this platform can improve the mastery of technical English vocabulary for Informatics Management students at the State Polytechnic of Fakfak. This can be seen by the increase in the average score at the posttest (54.78) compared to the average score at the pretest (40.28). In addition, based the on the results of the t-test analysis, the sig value obtained was 0.000, this means that the alternative hypothesis (ha) is accepted (sig. 0.000 <0.05) and the null hypothesis (H0) is rejected (sig. 0.000 >0.005). Thus, it shows that there is a significant increase in students' technical English vocabulary mastery after being taught using Readlang platform. Furthermore, the results of the questionnaire on students' perceptions after using Readlang platform showed that on average students thought that Readlang is easy to use (96%), is effective in helping to remember difficult vocabulary (89.2%), and has interesting features that could increase students enthusiasim in learning vocabulary (92%). Due to the use of Readlang platform in vocabulary learning tend to get good results, the authors recommend to the teacher or lecturers to use Readlang platform as a medium in learning foreign language vocabulary.

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