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Correlation of Vocabulary Proficiency and Learning Styles with Reading Comprehension of Prospective English Teachers: A Case of Universitas Lampung

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Abstract: Correlation of Vocabulary Proficiency and Learninng Styles with Reading Comprehension of Prospective English Teachers: A Case of Universitas Lampung. **Objectives:** To analyze the correlation of vocabulary proficiency (X_1) and reading achievement (Y); second, to investigate the correlation between learning styles (X_2) and reading achievement (Y); and to analyze the composite correlation between X_1, X_2 and Y. **Methods:** Simple random technique was used, 80 students were chosen, out of 120, based on the total sample, i.e., all students taking reading comprehension and vocabulary. A questionaire was used to measure learning styles, and two sets of tests were used, to measure vocabulary and reading achievement. **Findings:** There was a correlation between students' vocabulary proficiency (X_1) and reading achievement (Y), r = 0.532; there was a correlation between learning styles (X_2) and reading achievement (Y), r = 0.784; finally, there was a correlation between X_1, X_2 and Y, r = 0.823. **Conclusion:** Vocabulary proficiency and learning styles play important roles in improving reading achievement.

Keywords: vocabulary proficiency**,** learning styles, comprehension.

Abstrak: Korelasi Antara Penguasaan Kosa Kata Dan Gaya Belajar Mahasiswa dengan Kemampuan Membaca Mahasiswa Calon Guru Bahasa Inggris: Studi Kasus di Universitas Lampung. ***Tujuan:*** *Untuk menganalisis korelasi antara penguasaan kosa kata (X_1); dengan kemampuan membaca (Y); kedua, untuk mengkaji korelasi antara gaya belajar (X_2) dengan kemampuan membaca (Y); dan untuk menganalaisis korelasi gabungan antara X_1 dan X_2 dengan Y.* ***Metode:*** *Teknik sampling random sederhana digunakan untuk memilih sampel, dari populasi 120 diambil 80 berdasarkan sampel total, yakni semua mahasiswa yang mengambil reading dan vocabulary. Kuesioner digunakan untuk mengukur gaya belajar dan dua tes digunakan untuk mengukur kemampuan membaca dan penguasaan kosa kata.* ***Temuan:*** *Terdapat korelasi antara penguasaan kosa kata (X_1) dengan kemampuan membaca (Y), r = 0.532; kedua terdapat korelasi antara gaya belajar (X_2) dengan Y, r = 0.784; terakhir terdapat korelasi gabungan antara X_1, X_2 dengan Y, koefisien korelasi antara X_1, X_2, dan Y = 0.823.* ***Kesimpulan:*** *Penguasaan kosa kata dan penggunaan gaya belajar sangat penting dalam meningkatkan kemampuan membaca.*

Kata kunci: *penguasaan kosa kata, gaya belajar, kemampuan membaca.*

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INTRODUCTION

This research was motivated by relatively low reading comprehension achievement of some students. This was assumed to have something to do with students' lack of vocabulary proficiency (Wardak, 2022; Zamani, et al., 2022; Safadi, et al., 2012; Yuan, et al., 2014; Virgana, et al., 2019). Another assumption might be relating to students' learning styles (Parra, 2016; Chetty, et al., 2019; Wong, 2015; Sahabudin, et al., 2013; Övez, et al., 2016; Dinçol, et al., 2019; Ford, et al., 2001; & Muro, et al., 2007). Although there have been many studies carried out on reading comprehension and vocabulary, as well as learning styles, unfortunately, there has not been any research which have ever been published at least in Indonesian context pertaining to the relationship of vocabulary mastery on reading comprehension ability or relationship between students' learning style and their reading comprehension ability. Therefore, this research was done to answer the questions pertaining to whether there is a correlation between students' vocabulary proficiency and their reading comprehension achievement. Secondly, whether there is a correlation between students' learning styles and their reading comprehension achievement. And finally, whether there is a correlation between students' vocabulary proficiency, their learning styles and their reading comprehension achievement. This is, as expected, the strong point of the current research, and this is also the novelty of this research.

There are some previous studies conducted in relation to vocabulary, comprehension, or learning style. One of the previous studies is carried out by Anjomshoa, et al. (2014). The authors who carried out the study in Iran have found that there was a significant positive relationship between vocabulary knowledge and reading comprehension. There is a mutual relational benefit between vocabulary and reading comprehension. For example, a study by Liu, et al (2018) who investigate the effect of extensive reading on the improvement of vocabulary have found out that extensive reading has a significant effect on the development of students' vocabulary. Other studies which are focused on the effect of extensive reading on vocabulary include among others Lee, 2007; Kweon & Kim, 2008; Cha, 2009; Yamashita & Kan, 2010; Soltani, 2011; Tiryaki & Tütüniº, 2012; Chang, 2013; Webb & Chang, 2015; Ismael, et al. 2017; Suk, 2017; Tabata-Sandom, 2017). All studies aforementioned have found out that there is a significant effect of the use of extensive reading on the development of students' vocabulary. It means that when students are directed to do reading a lot, their vocabulary tend to develop, and in its return, their reading comprehension achievement also tend to increase.

Previous studies were also done to investigate the effect of vocabulary mastery on the students' reading ability. For example, Sidek, et al. (2015). They studied the role of vocabulary in reading comprehension and found out that the participants' scores on vocabulary test and reading comprehension test for their first language text were significantly better than their scores for the English as a foreign language (EFL) text. After being cross checked using interview with the students of why their vocabulary and reading test scores were better in the L1 than in EFL, it was found that the participants' vocabulary knowledge in the EFL was less sufficient than that in their native language. The findings reveal the evidence that a reader's level of vocabulary knowledge is one of the elements that plays a highly influential effect on determining reading comprehension performance in the EFL. Other studies found out that vocabulary was the best indicator and predictor in determining the quality of students' reading comprehension ability (e.g. Nation, 2001; Read, 2000; Read, 2004; Tannenbaum, Torgesen

& Wagner, 2006). Furthermore, Anam (2019) who investigated the role of vocabulary mastery on the success in TOFEL test especially on reading section has found out that vocabulary has a significant role in improving testers' TOEFL scores especially on reading section. Another study by Safadi, et al. (2012) on the effect of scaffolding instruction on reading comprehension found out that the participants who learned reading using scaffolding got significant improvement in their reading comprehension skills.

The second variable is learning styles which, in general psychology, refers to learners' favored approach to learning, which includes the process of receiving, collecting, processing, and interpreting to become knowledgeable (Kolb, 2014, Wong, 2015, Sahabudin, et al. 2013). Previous studies have also been done on the effect of learning styles on students' success in learning. One of them is Para (2016). The author states that the study allowed them to recognize that each person learns differently. Further the author states that their learning styles and learning strategies are influenced by the environment and the resources at their place. It meaning that every individual student may have different learning styles and learning strategies due to their unique environment in their locality. Students in Lampung university may have different learning styles which are different from one environment to another, from one faculty to another. Another study was done by Chetty, et al (2019) and found that the lecturers' teaching styles affected the students' academic performance. They also conclude that teaching styles influence students' learning styles and academic performances.

Another study by (Övez, et al. (2016) investigated the effect of the equality between the learning and teaching styles of teachers on students' achievement among 700 students and 31 teachers. The study showed that teachers designed learning environments based on their own learning styles and that there has been a positive correlation between teachers' learning styles, students' learning styles and students' achievements in mathematics classes, that students' achievements raised when teaching is done based on their learning styles. The findings of the study are paralleled with those of some other studies in the literature (Dinçol, et al. 2011, Ford, et al., 2001, Muro, et al., 2007).

All studies discussed above were carried out outside Indonesian context. The problems which remain unresolved are whether, especially in Indonesian educational atmosphere, there is a correlation between students' vocabulary mastery and their reading comprehension achievement or not; secondly, whether there is a correlation between students' use of learning styles and their reading comprehension achievement or not; and finally whether there is a composite correlation between students' vocabulary mastery, and students' use of learning styles with their reading comprehension achievement or not. Therefore, the objectives of the study are to investigate the three types of correlations above.

METHODS

The current research is a quantitative approach using a correlative design. It was carried out in the English Study Program, Faculty of Teacher Training and Education Universitas Lampung in the fourth semester, 2020/2021 academic year. The English Study Program was chosen because it teaches the four language skills, one of them is *reading comprehension*, and language components, one of them is *vocabulary*. And to some extent the students in the English Study Program also, or least, once hear psycholinguistic term *learning styles*.

There three variables in the research: students' vocabulary proficiency (X_1), as the first independent variable, students' learning styles (X_2) as the second independent variable, and

students' reading comprehension achievement (Y) as the dependent variable. The research design can be seen in the following figure.

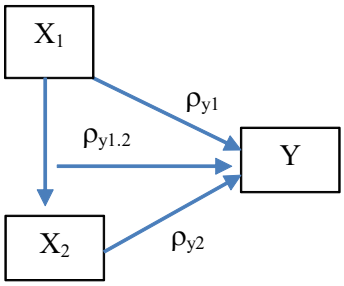

Figure 1. Variable constellation

Note

X1 : Students' vocabulary proficiency

X2 : Students' use of learning styles

Y : students' reading comprehension achievement

The population of the research is all students in the fourth semester in the English Education Study Program, Language and Arts Education Department, Faculty of Teacher Training and Education, Universitas Lampung, the total number of which is 120 students. The sample was taken based on the total sample, that is, all students taking reading comprehension and vocabulary, the total was 80 participants.

The type of the research is experimental, quantitative approach using correlational design which are relevant to the objectives of the research and the types of the data gathered. The objectives of the research are to analyze the correlation between students' vocabulary proficiency and their reading comprehension achievement, secondly, to analyze the correlation between students' learning styles and their reading comprehension achievement, and finally to analyze the composite correlation between students' vocabulary proficiency, their learning styles and their reading comprehension achievement.

The research instruments used in the research comprised of two types: Test and non-test. The test consisted of reading comprehension test items and vocabulary test items. The non-test consists of questionnaire to trace students' learning styles. The reading test was used to trace students' reading comprehension achievement. The test consisted of 20 items with multiple choice A, B, C, or D. The vocabulary test comprised 27 items with multiple items as well. Both reading and vocabulary tests were designed based on indicators/blue print of the reading comprehension syllabus and vocabulary syllabus. The following Table 1 shows the blueprint of reading comprehension test.

Table 1. The blue print of reading comprehension test

No	Basic competence	Semester	Material	Indicators	Items Form	Item No. 1
1	Responding meaning and rhetorical step in simple short essay accurately related to the environment around us in recount and narrative text	IV	Recount and narrative text	Able to answer questions about: 1. Main idea conveyed in recount and narrative texts. 2. Textual and contextual meaning in recount and	Multiple Choice	7, 10, 12, 15, 19 8, 16, 18, 23, 24

		narrative texts. 3. Rhetorical steps in recount and narrative texts. 4. Communicative purposes in recount and narrative texts. 5. The language function in recount and narrative texts.	14, 22, 25 5, 6, 13, 21, 26 1,2,3,4, 9, 11,17, 20, 27, 28
	Total		28

Table 2. The blueprint of vocabulary test

No	Indicators	Number of items	Total items
1.	Knowledge of antonyms	9, 14	2
2.	Knowledge of synonyms	3, 4, 4, 5, 8, 16, 21	6
3.	Knowledge of homophone	11, 18, 26	3
4.	Knowledge of syntactical structure	10, 12, 13	3
5.	Knowledge of literature and content areas to understand unfamiliar words	6, 7, 15, 20, 23	5
6.	Knowledge of suffixes	1, 2, 22, 24, 25, 27	6
7.	Knowledge of homograph	17, 19	2
	Total		27

The following is the blueprint of vocabulary test which has been used as the bases for design the vocabulary test items.

The third instrument which belongs to non-tests was the questionnaire. It is used to trace students' use of learning styles. Based on indicators of learning styles, the questionnaires were designed comprising 23 items. Since the questionnaire items were administered to the English students, they were not translated into Indonesian. The questionnaire items were measured using Likert Scale comprising 5 positive and negative options with difference system of scoring as follow.

1. Positive items A = Always scored 5, B = Often scored 4, C = Seldom scored 3, D = rarely score 2, and E = never score 1.
2. Negative items: A = Always scored 1, B = Often scored 2, C= Seldom scored 3, D = rarely score 4, and E = never score 5.

The questionnaire items were designed based on the blueprint and indicators of the learning styles as shown in the following Table 3.

Table 3. The blueprint of learning style questionnaires

No.	Sub-Variables	Indicators	Item Number	Total Item
1.	Learning style model	1. Visual Leaners	1, 2, 3, 4, 5, 6,	6
2.	Strategy for reading using visual	2. Use color visual 3. Learning how	7, 8 9, 10	2 2

		to use mind maps visual		
		4. Use arrow to draw visual	11, 12	2
		5. Use graphics and charts to get information	13, 14	2
3.	Learning style factors	6. Environment	15, 18, 19	3
		7. Personality	16, 17, 20, 21	4
		8. Developmental	22, 23	2
4.		Total		23

Table 3 shows that there are 23 questionnaire items to trace students' learning styles, which are relating to learning style model, that is, visual because it is most relevant to reading comprehension. The questions for visual learning style comprise of 6 items. The second category of the questionnaire items relates to strategy for reading using visual, comprising eight items. The last category of questionnaire items is related to learning style factors which consists of 9 items.

All instruments (tests and non-test) were tried out before being used as the instrument to collect the data to make sure their quality, especially pertaining to validity, reliability, discriminating, level of difficulty, and discriminating power. Besides, the quality of the alternatives (key answers and distractors) were tested. These were done to me sure that the instruments were of good quality, if the instruments were sound, the data resulted would be sound, and if the data were sound, the results of the data analysis would be satisfactory. The instruments were distributed students of the same level but different from those who were selected as sample of the research to avoid the practice effect, that is, if students have experienced in doing a test, they will tend to do better in the future because they have experiences doing the same or similar tests. After the instruments were distributed, the students were asked to do the tests and the questionnaire. Their answers to the tests and questionnaire items were then analyzed to determine their quality in validity, reliability, discriminating, level of difficulty, discriminating power, and the quality of alternatives. Items which did not fit a good quality of instruments were revised based on types of the weak erases, but the items which were too bad, for example, too low, too difficult or too easy, then they were dropped. After the instruments were revised, then they were re-tried out to make sure that they were suitable for a good instrument.

■ RESULTS AND DISCUSSION

There are three types of data needed in this study: the scores of reading comprehension, vocabulary and learning styles. The scores of reading comprehension were gathered by using reading comprehension test, those of vocabulary proficiency gathered by vocabulary test, and those of styles gathered by means of learning style questionnaire. All the data were elicited from 80 participants, all of which are valid and reliable. The results of the data analysis were put in the table of frequency distribution and then interpreted. The data comprise vocabulary proficiency scores (X_1), learning styles score (X_2) and reading comprehension scores (Y). The following is detailed description of each type of the data used in the current research.

Vocabulary Proficiency (X_1)

The students' vocabulary proficiency was measured using vocabulary test comprising 27

items which had been tried out to determine the quality of the test items especially on their validity, reliability, discriminating power and level of difficulty. Therefore, the data obtained are valid, reliable, with high discriminating power index and optimal level of difficulty index. This was done so that the results of the data analysis were sound and optimal. Each item was scored 1 for correct answer and 0 for wrong one. After the data were ordered from the top to the lowest, it was known that the minimum score was 11 and the maximum 26. The average score of vocabulary proficiency was 19.675, median 14.794, modus 17.761, standard deviation 3.791, and the total scores 1574. The average score of their vocabulary proficiency is 19.675 out of ideal score 26. Pertaining to the level of students' vocabulary proficiency, majority of them lie in the middle of the curve. Only some of them lie in the position of very good and some in the position of less. This shows the normal distribution. This figure also shows that the test was not too difficult nor too easy for them. Therefore, the results of the test represent the normal curve.

Learning Styles (X_2)

Learning style variable data was collected by means of questionnaires and measured using Likert scale. Being analyzed, it was found that the minimum score was 72, the maximum score 103, the average score 128.3, median 78.706, modus 89.962, standard deviation 8.694, the total score 6984. The distribution of the scores of the second independent variable, learning style, shows that the average score was 128.3. Learning style as another independent variable has been assumed to have a relation with the process and product of learning including reading comprehension achievement. The composition of students' learning styles has something to do with students' learning achievement, in general, including reading comprehension achievement (Parra, 2016; Chetty, et al., 2019; Kolb, 2014; Wong, 2015; Sahabudin, et al., 2013; Övez, et al., 2016; Dinçol, et al., 2011; Ford, et al., 2001; Muro, et al., 2007).

Reading Comprehension Scores (Y)

The minimum score of reading comprehension was13 and the maximum one is 26. The total number of the research participants was 80, male 10 and female 70, because majority of students in the English Study Program, FKIP Universitas Lampung are females from year to year, perhaps female like English more than males or perhaps the number of females is more dominant than that of males. The mean score of reading comprehension was 21.0625; median 18.800; modus 23.4231; standard deviation 3.43969; the total scores 1685. In this research reading comprehension achievement is considered as the dependent variable, that is, the variable which is assumed to be influenced by two independent variables, i.e. vocabulary proficiency and learning styles.

In this reserach, students' reading comprehension achievementg improve significantly where majority of students can achieve higher level of reading ability after being treated using vocabulary training. This finding is in line with the findings of previous research (Liu, et al., 2018; Zamani, et al., 2022; Wardak, 2022; Ghonivita, et al., 2021; & Asyiah, 2017) and theories of reading where the mastery of vocabulary is one of prerequisite for students to have better understanding of the idea conveyed in the text.

Given that there are three hypotheses to be tested in the current study: First, there is a correlation between students' vocabulary proficiency with their reading comprehension achievement; second, there is a correlation

between students' learning styles with their reading comprehension achievement; and finally there is a composite correlation between students' vocabulary proficiency and learning styles with their reading comprehension achievement, there are three types of discussion in this section as elaborated in the following paragraphs.

The correlation between Students' vocabulary proficiency (X_1) with their reading comprehension achievement (Y)

As aforementioned, the first hypothesis states that there is a correlation between students' vocabulary proficiency (X_1) with their reading comprehension achievement (Y). Having analyzed the data, regression formula was obtained, $v = 11.574 + 0.482\ X_1$. To determine whether the regression scores were significant or not, the researcher did significance and linearity tests using analysis of variance.

the results of significance test and linearity test where it was found the regression is very significant at the significant level á = 0.01. The test results of significance and linearity regression show that the regression $v = 10.895 + 0.542\ X_1$ was very significant and linear. It can be stated that every improvement of vocabulary proficiency score will be followed by the improvement of 0.542 point of reading comprehension score in 10.895 of constant. The results of regression equation can predict the correlation between vocabulary proficiency (X_1) and reading comprehension achievement (Y). This finding supports the Read's (2004), Nation's (2001), Qian's (2002), Read's (2000), Tannenbaum, Torgesen & Wagner's (2006) theory stating that vocabulary proficiency is the basis for understanding written materials, and one of the best predictors of students' reading ability. This study also supports the findings of the previous research (Anjomshoa, et al., 2014) who reported that there was a significant moderate positive relationship between vocabulary knowledge and reading comprehension. The difference between the findings of the current research with that of Anjomshoa, et al., (2014) was that they found only significant moderate positive relationship between vocabulary knowledge and reading comprehension. But the findings in the current research shows very significant correlation between vocabulary and their reading comprehension achievement. This may be related to the difference in cultural background and environment. The finding of the current study is much more convincing. The findings of the current study also support the findings of the previous studies (Gou, (2008), Golkar (2007), Hu, et al., (2000), Maher Salah (2008), Kaivanpanah (2009), Mehrpoor (2011) and Abbutt (2006), where all of the researchers have found that there were significant relationships between vocabulary knowledge and reading comprehension.

The Significance Test of Coefficient Correlation Between Vocabulary Proficiency (X_1) And Students' Reading Comprehension Achievement (Y) shows that the correlation is very significant ($t_o = 4.569 > t_{table} = 1.992$). The results of the analysis show that there is a positive correlation between vocabulary proficiency (X_1) and students' reading comprehension achievement (Y). To put it another way, the higher the vocabulary proficiency score, the higher the students' reading comprehension achievement will be. By contrast, the lower the vocabulary proficiency score, the lower their reading comprehension achievement. The vocabulary proficiency contribution to reading comprehension achievement with $R_{2y1} = 0.28255$ reveals that every 28.255% change of reading comprehension achievement variable (Y) was determined by vocabulary proficiency (X_1). This finding is in line with the findings of the previous

research stating that vocabulary is the best predictor about the students' reading comprehension ability (Lee, 2007; Kweon & Kim, 2008; Cha, 2009; Yamashita & Kan, 2010; Soltani, 2011; Tiryaki & Tütüniº, 2012; Chang, 2013; Webb & Chang, 2015; Ismael, et al. 2017; Suk, 2017; Tabata-Sandom, 2017).

The Correlation between Learning Styles (X_2) and Reading Comprehension Achievement (Y)

As stated in the previous paragraph, the second hypothesis stated that there was a correlation between students' learning styles (X_2) and their reading comprehension achievement (Y). Derived from the calculation, the regression was $v = -6.023 + 0.310X_2$. To determine whether the regression score was significant or not, the significance test and linearity of regression were carried out using analysis of variance (Anova). The results of the significance test and linearity of regression between learning styles and reading comprehension achievement are as follows: Regression is very significant ($F_o = 124.554 > F_{table} = 7.48$ at the significance level á = 0.01). Regression is linear ($F_o = 0.501 < F_{table} = 2.50$ at the significance level $\alpha = 0.01$).

Drew on the results of significance test and linearity regression aforementioned, the regression $v = -6.023 + 0.310X_2$ was very significant and linear. This indicates that every increase of learning style score will be followed by an increase of 0.310 point of reading comprehension achievement score in -6.023 of the constants. Figure 5 show that the regression formula can predict the correlation between learning styles (X_2) and reading comprehension achievement (Y).

The results of significance test of coefficient correlation indicate that there is a positive correlation between learning styles (X_2) and reading comprehension achievement (Y). To be more specific, the more effective the learning style are, the better the reading comprehension achievement score will be. By contrast, the less effective the learning style is, the lower the reading comprehension achievement will be.

The strength of relationship between Learning Styles (X_2) and Reading Comprehension Achievement (Y) was shown by the coefficient correlation $r_{y1} = 0784$. **) The correlation is very significant ($t_o = 9.200 > t_{table} = 1.992$)

The Correlation between Students' vocabulary proficiency (X_1), Learning Styles (X_2) and Reading Comprehension Achievement (Y)

The last hypothesis to be tested by the current research stated that there was a composite correlation between students' vocabulary proficiency (X_1) and learning styles (X_2) simultaneously with their reading comprehension achievement (Y). Multiple regression was used to test the hypothesis. Connected with the statistical calculation, the multiple regression was $v = -7.263 + 0.245X1 + 0.269\ X2$. The multiple regression was significant ($F_o = 80.774 > F_{table} = 3.15$ at the significance level $\alpha = 0.05$).

In line with the results of significance test of multiple regression equation, $v = -7.263 + 0.245X_1 + 0.269\ X_2$ is very significant. It reveals that every elevation of vocabulary proficiency score will be followed by the elevation of 0.245 and learning style score will be followed by the elevation of 0.269 point of reading comprehension achievement score in -7.263 on constants. Specifically, Table 8 shows that multiple regression can predict the correlation between vocabulary proficiency (X_1) and learning style (X_2) with reading comprehension achievement (Y).

The degree of the correlation between vocabulary proficiency (X_1) and learning style (X_2) simultaneously with reading

comprehension achievement (Y) were revealed by $R_{y12} = 0.82293$. The Significance Test of Coefficient Correlation Between Vocabulary Proficiency (X_1) And Learning Style (X_2) Simultaneously with Reading Comprehension Achievement (Y) shows that The correlation was very significant ($t_o = 10.9356 > F_{table} = 1.992$).

In line with the calculation above, the result was $t_o = 10.9356 > F_{table} = 1.992$ meaning that the regression of Y to X_1 and X_2 was significant. Coming from the data above, it was found that the contribution of vocabulary proficiency (X_1) and learning style (X_2) on reading comprehension achievement (Y) was $R^2_{y12} = 0.67721$, meaning that every change of 67.721% of reading comprehension variable (Y) was determined by vocabulary mastery (X_1) and learning style (X_2). To identify the strength of the two variables, vocabulary proficiency (X_1) and learning style (X_2), on reading comprehension achievement (Y), the results of the calculation reveals clearly that vocabulary proficiency (X_1) is the first rank of partial coefficient correlation with $r_{y1} = 2.146$, followed by learning style (X_2) with $r_{y2} = 0.964$ which lies in the second rank of partial coefficient correlation.

■ CONCLUSIONS

In line with the results of the data analysis dan discussion, the following conclusions are drawn: First, there is a positive correlation between students' vocabulary proficiency (X_1) and their reading comprehension achievement (Y). To put it another way, any time there is an increase in students' vocabulary proficiency score, it will be followed by the increase of students' reading comprehension achievement score. Specifically, the higher their vocabulary proficiency score, the higher their reading comprehension achievement score. It has been proved by the results of coefficient correlation X_1 to Y (r_{y1}) = 0.532. Second, there is a positive correlation between students' learning style (X_2) and their reading comprehension achievement (Y). Take for example, every elevation of students' learning-style score will be followed by the elevation of their reading comprehension-achievement score. This conclusion is supported by the evidence of the results of coefficient correlation X_2 to Y (r_{y2}) = 0.784. To be specifically, the more effective the students' learning style is, the better their reading comprehension achievement will be. And finally, there is a positive correlation between students' vocabulary proficiency (X_1) and their learning style (X_2) with their reading comprehension achievement (Y). As the evidence, it is proven by the results of multiple coefficient correlation = 0.823 reflecting that students' reading comprehension achievement was determined not only by their vocabulary proficiency (X_1) but also by their learning style (X_2).

The pedagogical implications of the research are: first, to gain high reading comprehension achievement, students should have high quality of vocabulary proficiency. To achieve such objective, it is the teachers'' task to help students improve their vocabulary by providing more interesting materials of reading for pleasure so that the students' motivation to read may increase, and consequently their vocabulary may also improve after having been exposed to reading texts. Second, another important point is that to help students improve their reading comprehension achievement, teachers should direct and guide students to familiarize with the use of learning styles. They should be trained various kind of learning styles. By understanding and familiarizing learning styles, students tend to be able to identify the more suitable techniques specially to elevate their reading comprehension achievement. And the last point is that in the process of teaching and learning English, either online or offline, teachers

should put their attention on vocabulary proficiency and learning styles so that their reading comprehension achievement will improve.

Limitations and Recommendations

Although it has been found that vocabulary has a vital role in increasing students reading comprehension achievement, based on informal interview with teachers and students, it has been found that, first, teachers are rarely carried out activities intended to help students improve their vocabulary proficiency. Secondly, even though learning styles has been found to be influential on students' reading comprehension achievement, many teachers have not made use of students' learning styles to elevate their achievement. Finally, the sample of the research is relatively limited.

Based on the limitation and problems found out in this research, the following recommendations are put forward. First, English teachers should help their students improve their vocabulary proficiency by providing various interesting activities that may arouse students' motivation to learn vocabulary. Second, teachers are recommended to guide their students to learn effective and efficiently by relating their learning process with their learning styles. Finally, future researchers who want to replicate this research should involve more participants so that the findings of the research are more confirmed.

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