

## Utilization of Duo lingo Application used and Practice Drilling Vocabulary Technique for Up-Grading Students' Reading Comprehension

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### Abstract

*English language has been commonly accepted as an active universal language in the world. People who study English language consider it as their personal proficiency. Therefore, nowadays many people, particularly students, ought to master English language. Mastering English language is an important value for the students to have. Refers to the condition, the researcher interested to help student to master English specially reading comprehension, and this research would find the following questions; Is there any influence of duolingo application used to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb?, (1) Is there any influence of vocabulary enhancement to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb?, (1) Is there any influence of duolingo application used and vocabulary enhancement to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb?. The method of this research is partial correlation method, then to analyze the data used normality, homogeneity, linearity, partial correlation and regression equation. The statistic value performed in level good correlation or the other word there are significant influence among duolingo application used and vocabulary enhancement to the students' reading comprehension during conducted for tenth grader at SMA Muhammadiyah Tanjung Redeb.*

**Key words;** Duolingo, Vocabulary, Reading

### INTRODUCTION

It is well known that reading is the important thing in human daily life. It is also important to students because they will get knowledge and information by reading. it gives many benefits for us. Reading is the window of the world. By reading, people can get more knowledge and information from books, magazines, newspapers, and others.so that reading to be one of mind skill of English, and in teaching and learning process it should be master beside listening, speaking and writing skill. According to Harmer, (1994: 68) there are some reasons why the teacher should teach the students to read English text. First, many students want to be able to read English text either for their career, for study purposes or simply for pleasure. Finociaro and Bonomo would like agree with Harmer that reading is bringing meaning to and getting meaning from printed or written material (in Tarigan 1973; 119). Through reading activity, the students can enlarge their knowledge and it can also make them wise and respectful. Students' reading ability must be developed.

In fact, according to the researcher's pre-observation in SMA Muhammadiyah the students still have several difficulties. For simplicity's sake the researcher have broken those layers down to four separate processes. First, to properly comprehend a written passage students must be able to decode the words on the page. Second, students need to hold the information in working memory long enough for the information to be more extensively processed. Third, students must have adequate vocabulary, grammar and syntactical skills to organize and interpret the written message efficiently. Fourth, students need to access higher order thinking skills to process the written message and go beyond the surface layer of the text and infer possible meaning. If a breakdown occurs in one or more of these steps then the students may fail to grasp the meaning of the text, which often results in reading comprehension problems and failure.

At the same time, the researcher realized that teachers have duties to develop their skill and ability. Various ways teachers do in reading class should be designed to build students' ability to understand increasingly complex content of the texts. The methods, techniques, and teaching media that is chosen and used by the teacher will influence the success of teaching learning process and students achievement. In the teaching reading activities a good method, media, and strategy are needed in this research. A good method can be an effort he students' reading ability better. Media and strategy also make the class to be alive during the reading lesson. By developing good method, technique and utilization of media students are expected to be able to have an active learning. Active learning can make the students interested in the reading lesson that given to them, not only silent or passive in the teaching and learning process.

Refers to those condition, researcher come up with the idea for teaching reading by utilize Duolingo application. Duolingo is an application designed to help foreign learner to learn a new language and they can learn more than one language there. It designed easily and comfortably, so do it does not feel like the users are learning, but rather to have fun with games. The other way is to give enrichment in vocabulary by drill technique, so the students can enhance their plenty vocabulary and it is being expected to be positive atmosphere in the classroom. Finally it is simultaneously develop students' reading comprehension in SMA Muhammadiyah Tanjung Redeb.

## **Related Literatures**

### **a. Duolingo Apps**

Duolingo is a free language learning applications and website. Like what they said at their website ,“Duolingo builds a world with free education and no language barriers. Users are able to learn languages for free while simultaneously translating web”(Jaskova, 2014, p.16). It has various and up to date techniques in learning language especially on vocabulary. It can make the students easier to understand and memorize the words, make them interest, enjoy, and happy in learning.

Duolingo is being as a future in learning language. It can easily access and provides a lot of language, so it is so helpful to those who want to learn a new language. Duolingo has a lot of features which can help the learners easily in learning language, such as list words for every day, discussion with other user so the learners can share with each other, the Lingot store, and immersion for more advanced learners.

Duolingo have a lot of language which language learners can choose the language what we want to learn, such as English, Arabic, Spanish, French, Dutch, and other languages. It also have educators forum that the users can exchange lesson ideas and experiences with each other such as teacher or student to them more easier in leaning. It can measure students achievement and dedication with perfect ways. It provide data such as point earned, of course overview tree, the streak, and the time spent.

The techniques which Duolingo provides in learning are so various and comfortable for beginner who learn a new language from the very basic. It is so easy to use because the procedures for the use are simple. It is because the target of Duolingo can be used for all ages such as children, teenagers, parents, and others. Munday (2016, p.96) stated that Duolingo is preferred than regular assignment and media because of the convenience it provides, it based on his research. It means that Duolingo is easy to use and more interesting so it will be comfortable to be one of the media that we use in teaching in classroom. Grego and Vesselinov (2012), they did a research which is see the effectiveness of Duolingo in learning language. Their research showed that the students are satisfied in learning language with Duolingo and they enjoyed to learn with it.

### **b. Vocabulary**

Vocabulary is the most important aspect which must considered in learning language. It is a basic element because vocabulary is required when language learners learn to speak, read,

write, and to make them understand from what they listen from a language that they have listened. It means that a limitation in mastering vocabulary will cause the obstacles to language learners in learning a new language. Jack C. Richards (2002, p.255) says that: “Vocabulary is a core component of language proficiency and provides much of the basic how well learners speak, listen, read, and write. Without an extensive vocabulary and strategies for acquiring new word, from making use language learning opportunities around them such as listening radio, listen to native speakers, using the language in different context, reading, or watching television.”

Students must master vocabulary to develop another aspect in language, such as speaking, reading, listening, and writing. According Nunan (1991, p.118) vocabulary is hardly get in learning process in classroom although it is the easiest aspect of second language to learn.

### **c. Reading**

Reading is a process when readers learn something from what they read and involve it in an academic context as a part of education (Grabe, 2009: 5). In the classroom, some teachers often use texts or books as media to deliver material of a subject. Furthermore, the teacher asks the students to read the texts to grab information in order that they could understand the material. reading as an activity in which the readers respond to and make sense of a text being read connected to their prior knowledge (Spratt, Pulverness, and William: 2005: 21). The activity is done by the readers as they want to get information and knowledge from the text meanwhile the readers have their own background knowledge. They automatically connect their knowledge with a new knowledge from what they are reading.

From the four integrated skills (listening, speaking, reading and writing skill), the writer is interested to come up with a more elaborate description about reading skill as what Tarigan (1987) cited from Huda (2000) calls that reading skill as the third skill that the children have gained after speaking and before writing. To the same extent reading should be stimulated when the students need to create the sense condition. In other words, the students will be guided to find the real answers of question they have in mind. Purposeful reading is encouraged by creating an interest in content, by trying in the new experience with personal background of the learning, by systematically extending the reading vocabulary.

Reading as an important skill to help people learn from human knowledge and experience. Through reading, knowledge has greatly contributed to the growth of mankind. Reading is the fastest and simplest way to raise people’s educational level (Hung & Tzeng, 2001). Reading is like opening the door of understanding to human’s past, where it can serve as a looking glass for our present. Reading also stimulates the development of brain cells, reinforces language skills, enhances organizational abilities, improves one’s temperament and poise, and provides strength to endure frustration. In short, reading is the best and only way of enabling humans to absorb new experience and replace old views.

**METHODOLOGY**

The method of this research is partial correlation method, specifically to find previous mentioned questions in abstract. The research took a place at SMA Muhammadiyah, Tanjung Redeb, the sample of this research was 35 students in class X IPA-I. The specific data gathering tools were: test instrument for vocabulary and reading, questionnaire for dulingo application used in teaching practice and school documentation. Then data analysis ware normality, homogeneity, linearity, finding partial correlation and regression equation.

**FINDINGS**

1. Normality Distribution

The normal distribution test was used to check whether the tests were normally distributed. The analysis used Kolmogorov-Smirnov formula through SPSS 22.0 for windows. It used significant criteria 0.05. The data was stated in normal distribution if significant point bigger than 5% or 0.05 (i.e.  $\alpha > 0.05$ ).

**Table 1. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
READING	.259	35	.082	.894	35	.070
DUOLINGO_APPLICATION	.118	35	.200*	.956	35	.174
VOCABULARY	.188	35	.090	.917	35	.011

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

From the results above we see in the Kolmogrov-Smirnov column that the significance for all variables is greater than 0.05. It can be concluded that in the data of duolingo application, vocabulary and reading are normally distributed.

## 2. Homogeneity of Variance

The homogeneity of variance test was accomplished after conducted normal distribution test. Levene Statistic test on SPSS 22.0 for windows was employed to analyze the data and to find out the homogeneity of variance. To find samples variant were homogenous, the significant of the data must be higher than 0.05, and the output as shown the following table:

**Table 2 Test of Homogeneity of Variances**

	Levene Statistic	df1	df2	Sig.
Homogenitas Reading-Duolingo	.693	8	25	.694
Homogenitas Reading-Vocabulary	.621	4	30	.651

The level of significance in the test was established at 0.05. Moreover in the table 4.4 the Significant value was 0.694 for duolingo and 0.651 for vocabulary, it is higher than the level of determined significance 0.05 (i.e.  $0.694 & 0.651 > 0.05$ ). The point in Levene Statistic show the smaller point is, the bigger homogeneity is. It draws a conclusion that the variances data is homogenous. Refer to the current finding, it can be concluded that the students were not vary, they almost have the same variant or homogenous.

## 3. Linear Analysis

The linearity test aims to determine whether two variables have a linear or significant relationship. This test is usually used as a requirement in correlation analysis or linear regression. SPSS basic test using the *Test of Lienearity* with a significance level of 0.05. Two variables are said to have a linear bias significance relationship. (*Linearity*) less than 0.05. The significant of the data must be higher than 0.05, and the output as shown the following in table 3.

From the results of table 3 output it can be seen that the significance value in linearity is 0,555. Because the significance is less than 0.05, it can be concluded that between the Reading and Duolingo Application variables there is a linear relationship.

**Table 3. Linearity of Reading and Duolingo Apps**

			ANOVA Table				
			Sum of	Df	Mean	F	Sig.
			Squares		Square		
READING *	Between	(Combined)	630.476	9	70.053	.773	.642
DUOLINGO-	Groups	Linearity	.820	1	.820	.009	.925
APPLICATION		Deviation					
		from	629.656	8	78.707	.868	.555
		Linearity					
	Within Groups		2266.667	25	90.667		
	Total		2897.143	34			

**Table 4. Linearity of Reading and Vocabulary**

			ANOVA Table				
			Sum of	Df	Mean	F	Sig.
			Squares		Square		
READING *	Between	(Combined)	162.454	4	40.614	.446	.775
VOCABULARY	Groups	Linearity	12.655	1	12.655	.139	.712
		Deviation					
		from	149.800	3	49.933	.548	.653
		Linearity					
	Within Groups		2734.689	30	91.156		
	Total		2897.143	34			

From the results of the above output it can be seen that the significance value in linearity is 0,653. Because the significance is less than 0.05, it can be concluded that between the Reading and Vocabulary variables there is a linear relationship.

**A. The Finding Influence of Duolingo Application Used to The Students' Reading Comprehension at SMA Muhammadiyah Tanjung Redeb**

The correlation study of Duolingo Application Used, vocabulary Enhancement and Reading Comprehension can be expressed or estimated in the form of mathematical equation.

Regarding the variables being investigated, the model of equation used in this study takes the formula of:  $Y = a + bX$ . To test whether the linier model of formula suitable or not, the following table of ANOVA present the result of the variance analysis.

**Table 5. Regression between Duolingo to Reading**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-83.855	22.205		-.776	.001
	DUOLINGO – APPLICATION	1.061	.632	.017	1.997	.924

a. Dependent Variable: READING

The regression equation is as follows:

$$Y = a + bX$$

$$Y = -83.855 + 1.061X$$

These numbers can be interpreted as follows; constant of -83.855; this means that if the Duolingo Application ( $X_1$ ) is 0, then the Reading Comprehension value is negative, which is equal to -83.855. Duolingo Application variable regression coefficient ( $X_1$ ) of 1.061 means that if the student score increases by 1, then Reading Comprehension (Y) will increase by 1.061. Positive coefficient means a positive relationship between Duolingo application and students reading comprehension.

1. Hypoteses

**H<sub>a</sub>**: There is any influence of duolingo application used to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb.

**H<sub>0</sub>**: There is no influence of duolingo application used to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb.

2. Determine the level of significance using  $\alpha = 5\%$  (significance of 5% or 0.05 is a standard measure that is often used in research).

3. Determine t count

Based on the table obtained T count of 1,997

4. Determine t table

The T distribution table is sought at  $\alpha = 5\% : 2 = 2.5\%$  (2-sided test) with degrees of freedom (df)  $n-k-1$  or  $35 - 1 = 34$  (n is the number of cases and k is the number of independent variables). With 2-sided testing (significance = 0.025) the results obtained for T Table amounted to 1.691.

5. Test criteria

$H_0$  accepted if  $-T \text{ Table} \leq T \text{ Calculate} \leq T \text{ Table}$

$H_0$  rejected if  $-T \text{ Calculate} < -T \text{ Table}$  or  $T \text{ Calculate} > T \text{ Table}$ .

6. Comparing t count with t table

Value of  $t \text{ count} > t \text{ table}$  ( $1,997 > 1,691$ ) then  $H_0$  is rejected.

7. Conclusion

Because the value of  $T \text{ Count} > T \text{ Table}$  ( $1,997 > 1,691$ ) then  $H_0$  is rejected, meaning that there is a significant influence between Duolingo application and Students reading comprehension.

**B. The Finding Influence of Vocabulary Enhancement to The Students' Reading Comprehension at SMA Muhammadiyah Tanjung Redeb**

Regression between Vocabulary enhancement and Students' reading comprehension describes in table 6 below :

**Table 6. Regression between vocabulary to reading**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	-76.906	12.737		-6.038	.000
	VOCABULARY	2.059	.155	.066	28.380	.706

a. Dependent Variable: READING

The regression equation is as follows:

$$Y = a + bX$$

$$Y = -76.906 + 2.059X$$

These numbers can be interpreted as follows; constant of  $-76.906$ ; this means that if the Vocabulary Enhancement ( $X_1$ ) is 0, then the Reading Comprehension value is negative, which is equal to  $-76.906$ . Vocabulary Enhancement variable regression coefficient ( $X_1$ ) of  $2.059$  means that if the student score increases by 1, then Reading Comprehension (Y) will increase by  $2.059$ . Positive coefficient means a positive relationship between Vocabulary Enhancement and students' reading comprehension.

1. Hypoteses

**H<sub>a</sub>**: There is any influence of vocabulary enhancement to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb.

**H<sub>0</sub>**: There is no influence of vocabulary enhancement to the students' reading comprehension at SMA Muhammadiyah Tanjung Redeb.

2. Determine the level of significance using  $\alpha = 5\%$  (significance of  $5\%$  or  $0.05$  is a standard measure that is often used in research).

3. Determine t count; Based on the table obtained T count of  $28.380$

4. Determine t table; The T distribution table is sought at  $\alpha = 5\% : 2 = 2.5\%$  (2-sided test) with degrees of freedom (df)  $n-k-1$  or  $35 - 1 = 34$  ( $n$  is the number of cases and  $k$  is the number of independent variables). With 2-sided testing (significance =  $0.025$ ) the results obtained for T Table amounted to  $1.691$ .

5. Test criteria

Ho accepted if  $-T \text{ Table} \leq T \text{ Calculate} \leq T \text{ Table}$

Ho rejected if  $-T \text{ Calculate} < -T \text{ Table}$  or  $T \text{ Calculate} > T \text{ Table}$ .

6. Comparing t count with t table; Value of t count  $>$  t table ( $28,380 > 1,691$ ) then Ho is rejected.

7. Conclusion, Because the value of T Count  $>$  T Table ( $28,380 > 1,691$ ) then Ho is rejected, meaning that there is a significant influence between Vocabulary Enhancement and Students' reading comprehension.

**C. The Finding Influence of Duolingo Application Used and Vocabulary Enhancement to The Students' Reading Comprehension at SMA Muhammadiyah Tanjung Redeb**

**Table 7. Multiple linear regression analysis**

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-27.316	8.568		-2.304	.006
	DUOLINGO_APPLICATION	.047	.155	.070	.215	.949
	VOCABULARY	3.220	.034	.966	28.020	.715

a. Dependent Variable: READING

The regression equation is as follows:

$$Y = a + b_1X_1 + b_2X_2$$

$$Y = -27,316 + (0,047)X_1 + (3,220)X_2$$

The regression equation can be explained as follows:

1. Constants of -27,316; meaning that if the Duolingo application used (X1) and Vocabulary Enhancement X2 value is 0, then Students' Reading comprehension (Y) is -27,316.
2. Duolingo application variable regression coefficient (X1) of 0.047 means that if other independent variables are fixed values and Duolingo application increase by 1%, then the variable students' reading comprehension will increase by 0.047. Coefficient is positive, meaning that there is a positive relationship between Duolingo application on Students' reading comprehension.
3. Regression coefficient of variable vocabulary enhancement (X2) is 3,220; meaning that if the other independent variables are fixed and vocabulary enhancement increases by 1%, then the variable students' reading comprehension will increase by 3,220. Positive coefficient means that there is a positive relationship between vocabulary enhancements on Students' reading comprehension.

**Table 8. Coefficient Correlation**

Interval Coefficient	Level Correlation
0.00 – 0.199	Very Poor
0.20 – 0.399	Poor
0.30 – 0.599	Enough
0.60 – 0.799	Good
0.80 – 1.000	Excellent

**Table 9. Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836 <sup>a</sup>	.872	.890	2.344

a. Predictors: (Constant), DUOLINGO, VOCABULARY

b. Dependent Variable: READING

Based on the table above, the R number is 0.836. This shows that there is a very strong relationship between the Duolingo application used and vocabulary enhancement to the students' reading comprehension.

## DISCUSSION

There were factors which influence the success of the study. The technique of presenting the materials which was used must be varied by means to attract the students' motivation and more active in learning process. Here, the writer used duolingo application and vocabulary enhancement in teaching reading comprehension.

The teacher supported the students to participate actively in class. In addition, most of students agreed and enjoy that use duolingo application and vocabulary enhancement could motivate them and they realized their ability improved. The outcome of this research verified that when individuals cooperate on the environment, socio-cognitive conflict occurs that creates cognitive development, which in turn stimulates perspective-taking ability and cognitive development as Piaget's theory on Cognitive Developmental.

Practice duolingo application used and vocabulary enhancement in teaching and learning process promotes students to interact in peers or groups, it is able to occur experiential learning as Vygotsky's theory on Social Developmental explained that that knowledge is social, constructed from cooperative efforts to learn, understand, and solve problems. Teaching and learning process through duolingo application used and vocabulary enhancement is relevant with the theory because happening social interaction with member of group more over a skilful teacher is meaningful way to develop students' competence. So, students who learn reading skill in a group through duolingo application used and vocabulary enhancement will highly boost their learning motivation because student can share and negotiate to build the way of thinking, by having development competence will effect to students' reading comprehension. Therefore, all agreed that duolingo application used and vocabulary enhancement will gave highly motivation to them in learning and could encourage the student's interest in English lesson.

## CONCLUSION

Based on the analysis result of this research, it can be deduced that the duolingo application used and Vocabulary enhancement can facilitate and help the students getting a good in reading comprehension and comprehend of the meaning on whole text, and the statistic value performed in level good correlation or the other word there are significant influence among duolingo application used and vocabulary enhancement to the students' reading comprehension during conducted for tenth grader at SMA Muhammadiyah Tanjung Redeb.

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