

The Relationship Between Depth of Vocabulary Knowledge, Home Literacy, and English Reading Comprehension Achievement

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Abstract

This study aimed at describing the correlation and contribution between learners' depth of vocabulary, home literacy, and English reading comprehension achievement. This study was significant due to the lack of empirical research conducted in this topic in Indonesian context. The participants in this study were first-year Mechanical Engineering Department EFL learners at Diponegoro University, Central Java, Indonesia (n=77). The data were gathered by using Word Association Test (WAT), Home Literacy Questionnaire (HLQ), and Reading Comprehension Test (RCT). The findings revealed that: (1) learners' depth of vocabulary knowledge significantly correlated to English reading comprehension achievement ($r=0.662$), (2) learners' depth of vocabulary knowledge contributed 43.9% to their English reading comprehension achievement, (3) learners' home literacy significantly correlated to English reading comprehension achievement ($r=0.610$), (4) learners' home literacy accounted for 37.3% to their English reading comprehension achievement, (5) learners' depth of vocabulary knowledge and home literacy significantly correlated to their English reading comprehension achievement ($r=0.749$), and (6) learners' depth of vocabulary knowledge and home literacy contributed 56.1% to their English reading comprehension achievement. The findings added the body of literature that the higher the adult EFL learners' score on depth of vocabulary knowledge and home literacy, the higher their score on English reading comprehension achievement.

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INTRODUCTION

Over the years, it has been widely believed that reading comprehension both in first and second language is affected by the knowledge of vocabulary in a text as well as textually relevant background knowledge and the application of general reading strategies. However, research findings in reading comprehension have proven that vocabulary knowledge has been regarded as the most important dimension in learners' reading comprehension achievement.

Alongside this, researchers commonly distinguish between breadth and depth of vocabulary knowledge. However, Dealing with the important role of depth of vocabulary knowledge, scholars in vocabulary knowledge field have noted the complexity and multidimensionality of world knowledge and have suggested that measuring examining aspects of depth of vocabulary knowledge make a stronger contribution to reading performance (Nassaji, 2004).

In addition to this, exposure to literacy sources (i.e. books) and participation in literate or literacy-related interactions with parents, caretakers, family members, and experienced others are seen as one of important points in preparing learners for instruction in reading at their formal stage of education. (Leseman & de Jong, 1998). There are, however, large differences in the home literacy activities and environment. These variations of home literacy practices consequently influence the preparation of learners for school learning.

Regarding the urgency of home literacy practices in learners' literacy success, several programs have been implemented to promote home literacy in families starting at early stage of learning in English as a first, second, and foreign language context. For instance in Indonesia context, the implementation of home or family literacy programs are hoped to specifically foster Indonesian learners' literacy achievement at school and generally improve the learners' knowledge (Ministry of National Education, 2011). In relation with the

implementation of home literacy program, empirical evidences have shown that learners' home literacy is strongly correlated with their literacy success.

Due to its importance, there has been much attention given to the study of depth of vocabulary knowledge and reading comprehension as well as home literacy and reading comprehension outcomes (such as Farahani, 2006; Mortazavi, 2006). Unfortunately, there have been surprisingly few studies examining the relationship between the depth of vocabulary knowledge, home literacy and English reading comprehension achievement in EFL adult learners in Indonesian context. Therefore, the present study aimed at describing the relationship between the EFL adult learners' depth of vocabulary knowledge, home literacy and English reading comprehension achievement in Indonesia.

METHODS

Correlational research design was used to address the goals in the present study. The participants were first-year Mechanical Engineering students at Diponegoro University, Central Java Indonesia (n=77). To gather the data, participants were asked to complete Word Association Test (WAT), Home Literacy Questionnaire (HLQ), and Reading Comprehension Test (RCT). Pearson correlation and regression analysis were administered to analyze the data.

RESULT AND DISCUSSION

The Relationship between Depth of Vocabulary Knowledge and English Reading Comprehension Achievement in Indonesian EFL Adult Learners

As shown in the Table 1, the coefficient correlation (r) between WAT and RCT is 0.662. This finding showed that there was a positive correlation between the scores of participants' WAT and RCT. The statistical calculation also revealed that the learners' depth of vocabulary

knowledge significantly correlated to their English reading comprehension achievement.

Table 1.

		X1	Y
X1	Pearson Correlation	1	0.662**
	Sig. (2-tailed)		0.000
	N	57	57
Y	Pearson Correlation	0.662**	1
	Sig. (2-tailed)	0.000	
	N	57	57

Table 2 presents values of R^2 of the correlation coefficients. According to the findings, 0.439 provides an estimate of the proportion of overlapping variance between variable X_1 (WAT) and Y (RCT) scores. The regression coefficient X_1 that was 0.439 accounts for 43% of the variance in the reading comprehension achievement.

Table 2.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.662 ^a	0.439	0.429	8.88667

a. Predictors: (Constant), X1
b. Dependent Variable: Y

Further, the value of linear regression equation between X_1 and Y was calculated. According to the findings, the equation of linear regression was $\hat{Y} = 16.841 + 0.389X_1$. The value of 16.841 means that if the value of X_1 is 0, the value of Y is 16.841. On the other words, 1 unit additional value of X_1 , the value of Y will increase as much as 0.389.

The Relationship between Home Literacy and English Reading Comprehension Achievement in Indonesian EFL Adult Learners As the table 3 shows, the coefficient correlation between learners' HLQ and RCT score positive. The result also showed that the correalltion between HLQ and RCT was significant ($r=0.61$).

Furthermore, the regression coefficient R^2 of learners' HLQ and RCT score was 0.373 as presented in Table 4. This further indicates

that HLQ accounts for 37% of the variance in the criterion variable which is reading comprehension achievement.

Table 3.

		X2	Y
X2	Pearson Correlation	1	0.610**
	Sig. (2-tailed)		0.000
	N	57	57
Y	Pearson Correlation	0.610**	1
	Sig. (2-tailed)	0.000	
	N	57	57

Table 4.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.610 ^a	0.373	0.361	9.39692

a. Predictors: (Constant), X2
b. Dependent Variable: Y

Alongside the previous findings, value of linear regression equation between X_2 and Y. According to the findings above, the equation of linear regression was $\hat{Y} = 29.167 + 0.673X_2$. The value of 29.167 means that if the value of X_2 is 0, the value of Y is 29.167. On the other words, 1 unit additional value of X_2 , the value of Y will increase as much as 0.673.

The Relationship between Depth of Vocabulary Knowledge and Home Literacy to English Reading Comprehension Achievement in Indonesian EFL Adult Learners From Table 5, it can be seen that the coefficient correlation between WAT, HLQ, and RCT was 0.749. This further means that the correlation of learners' word association test and home literacy questionnaire score was positive and significant to their English reading comprehension achievement test score.

The data also showed that the R^2 of WAT and HLQ to RCT was 0.561. This further means that learners' Word Association Test and Home Literacy Questionnaire scores contributed 56.1% to the learners' Reading Comprehension Test score. The rest of 43.9% was contributed

and affected by other factors. Expanding from these findings, another statistical analysis was done to find out which variables contributed greater to the learners' reading comprehension achievement.

Table 5.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.749 ^a	0.561	0.545	7.92843	0.561	34.565	2	54	0.000

a. Predictors: (Constant), X₂, X₁

b. Dependent Variable: Y

Further analysis was conducted to find out the the value of linear regression equation. Based on the findings, the equation of linear regression was $\hat{Y} = 2.975 + 0.286X_1 + 0.432X_2$. The value of 2.975 means that if the value of X₁ and X₂ are 0, the value of Y is 2.975. The regression coefficient X₁ is 0,286 means that every 1 unit additional value of X₁, the value of Y will increase as much as 0.286. In line with this, the regression coefficient of X₂ is 0.432 means that every 1 unit additional values of X₂, the value of Y will increase as much as 0.432.

The first objective of the present study was to explain the correlation between depth of vocabulary knowledge and learners' English reading comprehension achievement. Regarding this objective, previous studies in the context of English as a first, second and foreign language have been done and reported that depth of vocabulary knowledge was significant to the learners' reading comprehension outcomes. Expanding upon this research result, a Pearson correlation analysis was conducted in the present study to find out the relationship between depth of vocabulary knowledge and English reading comprehension achievement in EFL adult learners in Indonesian context.

Given the fact that there was a strong correlation between depth of vocabulary knowledge and English reading comprehension achievement as reported in the previous studies, it might have to be expected that the depth of vocabulary knowledge and English reading comprehension achievement in EFL adult

learners in Indonesian context to be closely related. Based on the statistical analysis administered in the present study, the finding confirmed the previous research results that the depth of vocabulary knowledge and English reading comprehension achievement in EFL adult learners in Indonesian context was significantly associated ($r=0.662$). This finding indicated that the adult EFL learners' depth of vocabulary knowledge plays important role in their English reading comprehension achievement.

Alongside this, the finding in the present study has also proven that having sufficient knowledge on depth of vocabulary is a critical issue in comprehending the English text. This further fits into the theoretical background used in the present study that a large extent of vocabulary knowledge is important in order to be able to comprehend a certain text (Laufer, 1989). On the other words, while adequate depth of vocabulary knowledge promoted the adult learners' reading comprehension achievement, the vocabulary difficulty might impede the learners' English reading comprehension achievement.

Referring back to the second question in the present study: how does the depth of vocabulary knowledge contribute to the learners' English reading comprehension?, a single regression analysis was performed to address the issue. The findings of the statistical analysis showed that the regression coefficient (r^2) of learners' depth of vocabulary knowledge and reading comprehension achievement was 0.439. This finding indicated that the learners' depth of vocabulary knowledge accounted for about 43% of the variance in reading comprehension achievement while the other 57% was influenced by other potential factors such as background knowledge, inferencing strategy, and so on.

Based on the findings on the contribution of learners' depth of vocabulary knowledge and English reading comprehension achievement in adult EFL learners in Indonesian context, it is important to note that the findings were in accordance with the previous research results

(Richek, 2005; Bromley, 2004) in that the researcher in the field put emphasis on depth of vocabulary knowledge as one of the predictors of reading achievement. They are also consistent with the theoretical view that the ability to be successful in reading comprehension depends, to a large extent, on having an adequate vocabulary knowledge (Laufer, 1989; Nation, 1993).

The next research question addressed in the present study was: how does the learners' home literacy correlate to their reading comprehension achievement? The finding on learners' home literacy and their English reading comprehension achievement revealed a positive and significant correlation ($r=0.662$). This finding implied that a higher the adult EFL learners' score on home literacy, the higher their English reading comprehension achievement result. Furthermore, this finding also indicated that the home literacy practices were empirically proven as a crucial factor in the adult EFL learners' English reading comprehension outcomes.

Given the fact that home literacy played important role on the learners' English reading comprehension achievement in the context of adult EFL learners in Indonesia, this finding confirmed that experienced others and learners' environment are considered as critical prerequisites in the learners' literacy success including their reading comprehension not only in young learners but also in adult learners. Put it in other words, this finding provides important pathway through which the home literacy practices in EFL learners' in university level in Indonesian context exert their influence on learners' literacy outcomes, primarily reading comprehension.

Drawing upon the finding above, the opportunities provided for participation in literacy practices in the home environment are closely related to parents or care takers or experienced other's own literacy use at home. The use of literacy at home by parents or care takers or experienced others are believed to depend on their education, jobs, social networks, associated traditions, and their community

involvement. In the context of young learners, the way in which parent-child literacy-related interactions are arranged and the kind of apprenticeships that are provided are dependent upon the models or examples of literacy use and on the behavioral roles for the participants, offered in the diverse context of literacy use in which parents are involved (Leseman & de Jong, 1998). By considering the possibility that learners may leave apart from their or parents, in the context of older learners (for instance college students) the literacy-related interactions are argued to also involve not only parents but also their housemates.

The significant correlation between home literacy and literacy success particularly reading comprehension achievement in EFL adult learners fit the constructivist theoretical framework. This theory asserted that the process of appropriation of knowledge, skills, and values involved in these practices can be promoted by experienced others, for instance by parents (Rogoff, 1990). While previous studies on home literacy and reading comprehension outcomes have been conducted mainly in young ELL learners, the finding of the present study has proven that experienced others also play important roles in the literacy outcomes on adult learners.

Majority of previous studies in home literacy have focused on young learners. Dealing with this, the findings of the previous studies provided the empirical evidences that young learners' home literacy was linked to their literacy outcome, primarily reading comprehension. In line with the results of the previous studies, the findings of this present study has reported that adult EFL learners' home literacy accounted for 37% to their English reading comprehension achievement. This result is considered as a noteworthy finding in the present study for it added the body of literature in this field that home literacy in EFL adult learners did contribute to their English reading comprehension outcomes. In addition, this finding highlights the importance to promote home literacy in English language to foster the

adult learners' English reading comprehension success.

Furthermore, According to the statistical analysis performed in the present study, the finding reported that the relationship between learners' depth of vocabulary knowledge and home literacy was positive and significant to the learners' reading comprehension achievement ($r=0.749$). This further indicated that the higher the adult EFL learners' score on depth of vocabulary knowledge and home literacy, the higher their score on English reading comprehension achievement. This research finding has clearly proven that the EFL learners' depth of English vocabulary knowledge and home English literacy were important factors to their English reading comprehension outcomes. Moreover, the findings provided an important extension to the literature by empirically proving that in the context of adult learners in Indonesia, English depth of vocabulary knowledge and English home literacy are highly linked to their English reading comprehension success. Therefore, paying careful attention on enriching depth of vocabulary knowledge and promoting home literacy practices in English language would be important in supporting the EFL adult learners' reading comprehension achievement.

Given the fact that there was positive and significant correlation between learners' depth of vocabulary knowledge and home literacy to their reading comprehension achievement, it is urgent to explain the contribution of the measure to other measures. Regarding this issue, multiple regression analysis was performed to find out the contribution of learners' depth of vocabulary knowledge and home literacy to their reading comprehension achievement. According to the data, the contribution of learners vocabulary knowledge and home literacy to reading comprehension achievement accounts for 56%. This finding further means that the other 43% were influenced and contributed by other factors.

In line with the previous paragraph, further analysis was conducted to find out the the value of linear regression equation between EFL adult learners' depth of vocabulary

knowledge and hme literacy to English reading comprehension achievement. The results revealed that if the learners' score on depth of vocabulary knoweledge is 0, their score on English reading comprehension test would be 2.975. In addition, the findings reported that the regression coefficient of depth of vocabulary knowelge was 0,286. This further means that every 1 unit additional additional score on EFL adult learners' depth of vocabulary knowledge, their English reading comprehension score would increase 0.286 point. Based on the statistical analysis performed in the present study, the finding has shown that the regression coefficient of the EFL adult learners' home literacy was 0.432 which means that every 1 unit additional score on learners' home literacy score would add 0.432 point to their English reading comprehension outcomes.

In terms of exploring the contribution of learners' depth of vocabulary knowledge and home literacy to their reading comprehension achievement, additional analysis was performed to find out the most contributed measure to reading cmprehension achievement. In line with this issue, the statistical analysis reported that learners' depth of vocabulary knowledge contributed a bigger amount of precentage to reading comprehension achievement compared to home literacy.

CONCLUSION

Results in this present study reported that depth of vocabulary knowledge significantly correlated to the EFL adult learners' English reading comprehension. The findings also revealed that depth of vocabulary knowledge accounted for 43.9% of the EFL adult learners' English reading comprehension achievement. Based on these findings, it is important to note that: (1) those who had stronger depth of vocabulary knowledge had better score on English reading comprehension achievement, (2) depth of vocabulary knowledge in adult EFL learners played important role in their English reading comprehension achievement. These findings add to and confirm the literature in

English as a first, second, and foreign language learning concerning the important role of depth of vocabulary knowledge in reading comprehension outcomes (de Bot et al., 1997). Furthermore, the above findings are in accordance with the previous research results (Richek, 2005; Bromley, 2004) in that they put emphasis on depth of vocabulary knowledge as one of the predictors of reading achievement. They are also consistent with the theoretical view that the ability to be successful in reading comprehension depends, to a large extent, on having an adequate vocabulary knowledge (Laufer, 1989; Nation, 1993)

Furthermore, the findings of the present study nudge us into accepting the notion that learners' home literacy contributes to their reading comprehension achievement. From the statistical analysis results, the findings in the present study showed that there was a positive and significant correlation between home literacy and reading comprehension outcomes ($r=0.61$). Moreover, evidence in this present study showed that the learners' home literacy contributed 37.7% to their reading comprehension achievement. This finding fit into the theoretical framework used in this present study, in which the interactions between learners and more advanced peers directly or indirectly have a positive influence on the learners' learning process, particularly the learners' literacy development (Vygotsky, 1978; Rogoff, 1990). This finding also added to the existing literature that exposure to literacy material in English is beneficial to the EFL learners' literacy achievement in Indonesian university context and situations.

Lastly, the findings of the present study showed that there was a positive and significantly strong correlation between learners' depth of vocabulary knowledge and home literacy to the learners' reading comprehension achievement ($r=.749$). Alongside this, learners' depth of vocabulary knowledge and home literacy contributed 56% to the learners' English reading comprehension achievement. To sum up, it has been empirically proven that depth of vocabulary knowledge and home literacy

strongly correlated and considered as a powerful predictor to EFL adult learners' English reading comprehension achievement in Indonesian context.

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