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# Effectiveness of Rewordify in a Receptive Skill: Implication in Reading Comprehension in EFL A2 Ecuadorian Learners in Tertiary Education Level

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## Abstract

Reading comprehension is necessary to ensure success in different areas; it is the main reason to identify instruments which allow learners to develop this skill. The current study was performed with adult EFL Ecuadorian learners from a university in Babahoyo, where they performed three types of reading comprehension exercises using rewordify and dictionaries as an instrument to improve comprehension. The results demonstrated that both appear to promote comprehension, but some results showed that rewordify tends to be a further success in a specific type of reading activity.

**Keywords:** Reading Comprehension, Rewordify App, A2 Learners Ecuadorian Learners

## 1. Introduction

It is being recognized the importance of language proficiency in the current scientific, social and financial areas, one of the priorities in the current curriculum rest in the development of reading skills (Salari & Hosseini, 2019, p. 489). It is undeniable the importance to comprehend precisely the message which is presented in a piece of text. However, even when teachers and learners are immersed in the identification of the best techniques, it is clearly observed some deficiencies in comprehension among learners (Taha, 2018; Escudero, Fuertes, & López, L. 2019).

Considering the full range of techniques and instruments used to promote reading comprehension (Mousavian, & Siahpoosh, 2018), this research directs its attention to the use of dictionaries and rewordify as instruments to facilitate reading comprehension in A2 learners from a university in Ecuador.

In relation to Ecuadorian learners, the use of online and printed dictionary is widely accepted in the educative community; however, rewordify is a new instrument which is not used or known by learners nor teachers, this characteristics open the door to move inside this technology in order to identify the best practices which ending promoting comprehension in Ecuadorian learners.

## 2. Literature review

Achieving proficiency in a foreign language successfully required necessary storage of information in the form of vocabulary and structure, which tends to be acquired through reading comprehension (Salari & Hosseini, 2019). Many authors agreed on that premise, and a variety of research has been done to identify best practices and useful instrument to promote reading comprehension among l2 learners (Soto et al., 2019; Rhodus, 2019). According to Simhachalam (2017), technology provides various tools to perform a variety of learning activities. Also, he stated that technology facilitates the language learning process in two ways, the former implies the use of a technological tool such as Rewordiffy.com to promote the four skills and the latter to raise interaction between the learning process participants.

Regarding Rewordify, it is a technological tool, which requires internet and allows learners to modify a complex piece of any text into a piece of text with simple words. Even this program changes the words itself the meaning of the words and the main ideas of the text maintain equally (Peachey, 2017).

Rewordify is recognized as a valuable tool for learners with dyslexia, especially in those cases where learners are not able to comprehend a text because they cannot understand words in context ( Edyburn, 2017). However, this program provides attractive benefits, which can help all of the learners. According to Rodhus (2019), rewordify deals effectively with problems, which are related to identifying the meaning of words ,which are unknown to learners, it works restating the problematic and complicated words and structure words into simple and understandable ones.

### 2.1 Research questions and Hypothesis

The following study intends to answer these research questions:

1. Does the use of rewordify improve reading comprehension on university learners of A2 level?
2. Is there a significative difference between the level of comprehension of texts gained by learners about rewordify and dictionary?
3. Does the type of reading comprehension exercise execute an effect on the results of the applied instrument: rewordify and dictionaries?

The hypothesis presented for the research questions are the following:

Research question 1

H0: Rewordify does not improve the reading comprehension of university EFL A2 learners.

H1: Rewordify affects the reading comprehension of the EFL learners of A2 level.

Research question 2

H0: there is no difference between reading comprehension among the use of rewordify and dictionaries.

H1: there is a difference in the level of comprehension of a text among the use of rewordify and dictionaries.

Research question 3

H0: The type of reading comprehension exercise execute an effect on the results of the applied instrument: rewordify and dictionaries

H1: The type of reading comprehension exercise does not execute any effect on the results of the applied instrument: rewordify and dictionaries

### 3. Method

This research follows an experimental design. The study started with the selection of the participants; 44 learners were chosen randomly. All of them belong to the same group of class, with a low intermediate level, aged between 20 to 54, and belonged to the same language center at an Ecuadorian university. Those learners were divided into three groups, group 0 represents the control group, and hence, they did not work with any instrument. Group 1 worked with dictionaries, and group 2 performed the task with the use of rewordify. All of the three groups received the same material at a similar period to perform the reading comprehension activities.

#### 3.1 Data collection and material

The results of the reading comprehension exercises were valued similarly, being 10 the highest score and 0 the lowest one. The score obtained by each group was classified according to the type of reading exercise, and the instrument used to achieve it.

The reading comprehension exercise belongs to PET exams; they were applied in printed forms, given to the entire participant individually. The reading comprehension exercises aimed to identify the level of understanding concerning three types of reading comprehension exercise. Reading 1 required learners to read the profile of some people and information related to some courses to select the best option for each one. Moreover, reading 2 valued learners' comprehension with questions in the form of true or false exercises, and finally reading 3 pursued to get participants answering five information questions related to the text.

#### 3.2 Data analysis

The score obtained by each learner was classified according to the type of reading exercise and instrument used with each group; also, the data analysis was elaborated with the SPSS for Windows program. This study manages a variety of variables; hence, to contrast the gathered data, the ANOVA statistic test and Post Hoc test were applied to the results obtained in the three types of reading exercises. Throughout this procedure it was possible to measure the variation between the means of the different instruments and reading exercises among the groups.

To facilitate the analysis of the variables, the group control was coded as 1, the group which uses dictionaries to perform the activity was coded 2, and the last group which worked with rewordify was named 3.

### 4. Results and findings

About reading 1, the ANOVA test showed that the mean of the group control is 1.6250, the mean of the dictionary group is 3.20, and the mean of rewordify instrument is 3.2308. In other words, the relation between them is expressed  $1=1.6250 < 2=3.20 < 3=3.2308$ , also the p-value or significance level is 0.038, being  $p\text{-value}=0.038 < 0.05$ . Hence, about ANOVA, there is a significant difference between the means of the three groups.

Besides, ANOVA analysis, a Post Hoc Test with Tukey was required. The recent analysis provided explicit comparisons between the results. By contrasting the control group (1) with the dictionary group or group 2, it is possible to observe that the variation between the mean of the control group and the dictionary group is not significant  $p\text{-value}: 0.067 > 0.05$ . Concerning the comparison between group control and rewordify group, the level of significance is also not relevant  $p\text{-value}: 0.073 > 0.05$ .

Regarding the comparison between the means of the dictionary and rewordify groups, it is possible to observe a slight difference between the means, 0.03077 in favor of the use of the rewordify instrument; however, the significance between the means of both groups are not statistically relevant  $p\text{-value}=0.999 > 0.05$ .

Table 1. Reading 1: Multiple comparisons between scores of the control, dictionary and rewordify group.

(I) Intrument	(J) Intrument	Mean			95% Confidence Interval	
		Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1.00	2.00	-1.57500	.68389	.067	-3.2380	.0880
	3.00	-1.60577	.71052	.073	-3.3335	.1220
2.00	1.00	1.57500	.68389	.067	-.0880	3.2380
	3.00	-.03077	.72106	.999	-1.7841	1.7226
3.00	1.00	1.60577	.71052	.073	-.1220	3.3335
	2.00	.03077	.72106	.999	-1.7226	1.7841

1. Post hoc test, Tukey HSD
2. 1: control group; 2: dictionary group; 3: rewordify group

Regarding reading 2, the ANOVA test demonstrated that the mean for the control group is 5.1176, the group with the dictionary as an instrument achieved 6.1333, and the group which utilized rewordify obtained 5.0769. The relation between the group is expressed  $2=6.133 > 1=5.1176 > 3=5.0769$ . Moreover, the p-value for this exercise represents 0.018,  $p\text{-value}=0.018 < 0.05$ . This result implies that statistically, there is an important difference between the means of the three groups.

Once applied the Post Hoc Test with Tukey was possible to contrast the variations between the scores of the three groups, for instance the comparison between the means of the control group with dictionary group indicate that exists a remarkable difference between the scores obtained for both groups,  $p\text{-value} = 0.032 < 0.05$ . The variation between the control group and the rewordify group demonstrated that in this case, there is not an essential difference between both means,  $p\text{-value} = 0.094 > 0.05$ .

Analyzing the difference between both means the dictionary group 2 and rewordify group 3 which represents 1.05641 was possible to observe that the difference between the result in group 2 is considered with the mean on group 3,  $p\text{-value} = 0.038 < 0.05$ .

Table 2. Reading 2: Multiple comparisons between scores of the control, dictionary and rewordify group.

(I) Intrument	(J) Intrument	Mean			95% Confidence Interval	
		Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1.00	2.00	-1.01569*	.38814	.032	-1.9587	-.0727
	3.00	.04072	.40369	.994	-.9400	1.0215
2.00	1.00	1.01569*	.38814	.032	.0727	1.9587
	3.00	1.05641*	.41519	.038	.0477	2.0651
3.00	1.00	-.04072	.40369	.994	-1.0215	.9400
	2.00	-1.05641*	.41519	.038	-2.0651	-.0477

1. Post hoc test , Tukey HSD
2. 1: control group; 2: dictionary group; 3: rewordify group

In reading 3, by analyzing the results obtained from the ANOVA the mean of the control group is 3.0588, the dictionary group is 4.7143, and the mean of rewordify is 5.8462, the difference between the means of the groups is significant  $p\text{-value} = 0.000 < 0.05$ . Also, contrasting the variation between the control group and dictionary group,  $p\text{-value} = 0.023 < 0.05$ . It implies that the variation on both means is remarkable statistically. The variation between the mean of the control group with the mean of the rewordify group is significant since  $p\text{-value} = 0.000 < 0.05$ . Also, the difference between the rewordify group and dictionary group is 1.13187, and  $p\text{-value} = 0.194 > 0.05$ , which implies that the difference is not crucial in statistical analysis.

Table 3. Reading 3: Multiple comparisons between scores of the control, dictionary and rewordify group.

(I) Intrument	(J) Intrument	Mean			95% Confidence Interval	
		Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1.00	2.00	-1.65546*	.60045	.023	-3.1156	-.1954
	3.00	-2.78733*	.61299	.000	-4.2779	-1.2968
2.00	1.00	1.65546*	.60045	.023	.1954	3.1156
	3.00	-1.13187	.64082	.194	-2.6901	.4264
3.00	1.00	2.78733*	.61299	.000	1.2968	4.2779
	2.00	1.13187	.64082	.194	-.4264	2.6901

1. Post hoc test, Tukey HSD
2. 1: control group; 2: dictionary group; 3: rewordify group

## 5. Discussion

Regarding research question 1, the variation in the comprehension level of a reading exercise depends on the type of reading comprehension activity. Concerning the findings, rewordify executes a significant effect on reading exercises, which focuses on true and false exercises ( $p$ -value:  $0.038 < 0.05$ ) and answering information questions ( $p$ -value:  $0.000 < 0.05$ ). On the other hand, rewordify does not generate a significant effect of reading exercises, which are related to matching categories, which is exemplified in exercise 1 ( $p$ -value:  $0.073$ ,  $0.999 > 0.05$ ).

About research question 2, it compares the results obtained by learners when they used dictionaries and the online resource named rewordify. This study demonstrated that for reading exercise which requires matching categories based on reading comprehension task, there is not a significant difference between the means of the scores achieved by learners who use dictionaries or the online program rewordify ( $p$ -value= $0.999$ ). However, the comprehension exercises related to identifying right or wrong answers in the form of True or False answers exists a remarkable difference between the mean of the scores obtained by the group of dictionaries and the group of rewordify ( $p$ -value= $0.038$ ). Finally, the mean of the scores in reading comprehension exercises related to information questions does not present any significant difference between the rewordify and dictionary groups ( $p$ -value= $0.194$ ).

Research question 3 intends to identify if the type of reading comprehension exercise executes any effect on the score obtained by the participants. Taking into consideration the means of the scores obtained for the different groups, the reading exercise which required learners to read and select the best option True or false to some exercises present the highest scores.

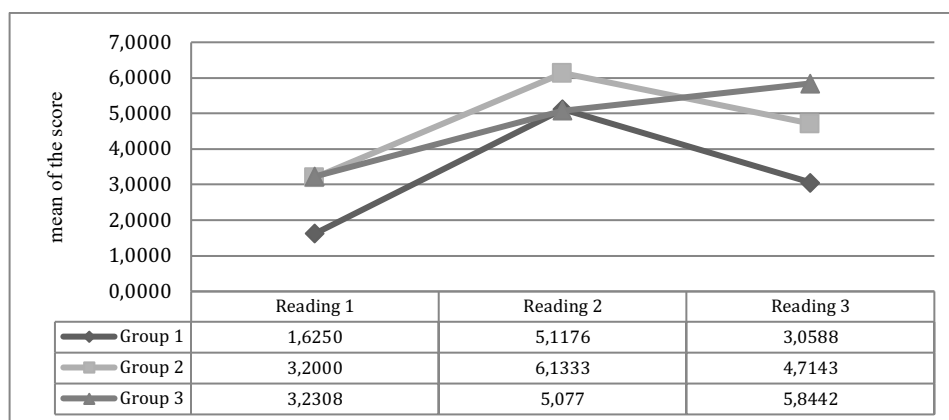


Figure 1. Mean of the scores obtained by students in the readings per group of study

## 6. Conclusions and implications

The results of this research provide insights about the application of rewordify in A2 adult Ecuadorian EFL learners since there is no a huge source of information related to the use of it in reading comprehension exercises, it has not been possible to contrast the current result with other similar studies.

Anyhow based on the result, this study demonstrated that in terms of application rewordify and dictionaries as an instrument to develop reading comprehension contribute positively to learners' comprehension in reading exercises. Hence, both instruments can be considered interchangeable in terms of success because the variation between the scores of both instruments was not significant statistically. However, there is a type of reading exercises which it seemed to work better with a specific instrument, it is rewordify, which is very helpful in those exercises where comprehension is measured through true or false questions. Taking into consideration the lack of similar studies in this area is advisable to perform similar studies with learners from different levels of proficiency.

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**Appendix**

Reading 1

ANOVA

Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25.724	2	12.862	3.552	.038
Within Groups	148.458	41	3.621		
Total	174.182	43			

POST HOC TEST

Multiple Comparisons

Dependent Variable: Score

Tukey HSD

(I) Intrument	(J) Intrument	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-1.57500	.68389	.067	-3.2380	.0880
	3.00	-1.60577	.71052	.073	-3.3335	.1220
2.00	1.00	1.57500	.68389	.067	-.0880	3.2380
	3.00	-.03077	.72106	.999	-1.7841	1.7226
3.00	1.00	1.60577	.71052	.073	-.1220	3.3335
	2.00	.03077	.72106	.999	-1.7226	1.7841

Homogeneous subsets

Score

Tukey HSDa,b

Intrument	N	Subset for alpha = 0.05
		1
1.00	16	1.6250
2.00	15	3.2000
3.00	13	3.2308
Sig.		.071

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.557.



- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Reading 2

## ANOVA

## Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.690	2	5.345	4.452	.018
Within Groups	50.421	42	1.201		
Total	61.111	44			

## Post hoc test

## Multiple Comparisons

Dependent Variable: Score

## Tukey HSD

(I) Intrument	(J) Intrument	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-1.01569*	.38814	.032	-1.9587	-.0727
	3.00	.04072	.40369	.994	-.9400	1.0215
2.00	1.00	1.01569*	.38814	.032	.0727	1.9587
	3.00	1.05641*	.41519	.038	.0477	2.0651
3.00	1.00	-.04072	.40369	.994	-1.0215	.9400
	2.00	-1.05641*	.41519	.038	-2.0651	-.0477

\*. The mean difference is significant at the 0.05 level.

## Homogeneous subsets

## Score

## Tukey HSDa,b

Intrument	N	Subset for alpha = 0.05	
		1	2
3.00	13	5.0769	
1.00	17	5.1176	
2.00	15		6.1333
Sig.		.994	1.000

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 14.821.  
 b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Reading 3

## ANOVA

## Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	59.146	2	29.573	10.684	.000
Within Groups	113.491	41	2.768		
Total	172.636	43			

## Post hoc test

## Multiple Comparisons

Dependent Variable: Score

## Tukey HSD

(I) Intrument	(J) Intrument	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-1.65546*	.60045	.023	-3.1156	-.1954
	3.00	-2.78733*	.61299	.000	-4.2779	-1.2968
2.00	1.00	1.65546*	.60045	.023	.1954	3.1156
	3.00	-1.13187	.64082	.194	-2.6901	.4264
3.00	1.00	2.78733*	.61299	.000	1.2968	4.2779
	2.00	1.13187	.64082	.194	-.4264	2.6901

\*. The mean difference is significant at the 0.05 level.

## Homogeneous subset

## Score

## Tukey HSDa,b

Intrument	N	Subset for alpha = 0.05	
		1	2
1.00	17	3.0588	
2.00	14		4.7143
3.00	13		5.8462
Sig.		1.000	.172

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 14.480.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.