

A COMPARATIVE STUDY OF GLOSSING, CONTEXTUALIZED, AND DECONTEXTUALIZED INSTRUCTION IN IRANIAN EFL LEARNERS' SHORT-TERM AND LONG-TERM VOCABULARY RETENTION

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Abstract: The present study compared the effectiveness of contextualized, decontextualized, and glossing on learners' short-term and long-term vocabulary retention in an EFL context. To carry out the study, 66 male senior high school students at intermediate language proficiency level were selected from four intact classes. A proficiency test was administered to all participants to assure their homogeneity in language proficiency. Then, the classes were assigned into four groups including three experimental groups, i.e., the decontextualized group, the contextualized group, the glossing group, and a control group. After receiving five sessions of treatment, a

vocabulary test was administered as the posttest to all the four groups once in order to assess their short-term retention and once 16 days later as a delayed posttest to assess their long-term retention of vocabulary. Two separate ANOVAs were run on the collected data which lent weight to the positive effect of the treatment on the students' long-term retention of vocabulary. The results revealed that the experimental groups outperformed the control group. Also, regarding the short-term retention, no significant difference was found between the experimental groups and the control group. Finally, it is highly recommended that language teachers and syllabus designers introduce this

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contextualized instruction to the learners to encourage a more interactive way to make sense of the text and consequently improve the students' long-term retention of vocabulary.

Keywords: Contextualized, decontextualized, glossing, short-term and long-term retention

Introduction

Vocabulary development is considered as one of the most important aspects of foreign language (FL) or second language (L2) learning and teaching (e.g., Hunt & Beglar, 2005; Knight, 2011). Laufer (as cited in Nugraheni, 2018) asserted that without understanding the text's vocabulary, text comprehension will not be possible, either in one's native language or in a FL. So, FL/L2 learners need multiple exposures to L2 vocabulary in various contexts through a variety of vocabulary instruction techniques and strategies (e.g., Nation, 2011; Schmitt, 2008). Vocabulary can be learned in many different procedures each of which with its pros and cons (Schmitt, 2000). In this regard, one of the innovative methods for

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vocabulary teaching based on the communicative approaches is to use context to help learners to guess the meaning of unknown words. This method is in contrast to the decontextualized vocabulary teaching technique which isolates the word from any communicative context. For example, learning vocabulary by using word lists and flashcards is considered a decontextualized teaching technique. Glossing, on the other hand, refers to elaboration on the target vocabulary items through, for example, providing the meaning of a word in the margin of a page on which the word appears (Nation, 2013).

Review of the Literature

Vocabulary information is considered as the collection of most factors necessary for mastering another language (Schmitt, 2008). There are different ways of vocabulary learning like contextualization, decontextualization, and marginal glossing.

Contextualized method

Contextualized method is a vocabulary teaching and learning method in which unfamiliar words are put in a context and the students are encouraged to guess the meanings (Strategies for Teaching Vocabulary, 2008). It aims at enriching the students' knowledge to guess meanings through their peers' learning experiences so that they can guess words even more effectively.

Decontextualized method

There are several vocabulary learning techniques which are considered as the decontextualized method, for instance, flashcards, synonym and antonym, and word list memorization (Hague, 1987). Decontextualized method is a vocabulary learning activity which requires the learners to memorize vocabulary in a form of word-for-word (Nation, 2001). Further, in this method, the existence of a dictionary is essential as learners are required to look for the meanings of the target word.

Glossing

As Nation (1990) suggested, glossing is “a method of providing the definition/explanation about an unknown word or concept while students are reading for comprehension” (p. 44).

Glossing refers to the summarized meaning of words in a text, usually presented as notes in the margin or between the lines of a text. It helps the reader to understand difficult or unfamiliar words in the text. It can be interpretations, explanations, or translations of words (Richards & Schmidt, 2010). In this study, glossing is operationalized as bringing the meaning of new words in L1 in the margin of the text.

There are comprehensive bodies of research about contextualization, decontextualization, and marginal glossing learning. Öztürk (2012) examined the effect of context on the learners' achievement through vocabulary tests. The findings proved that there was a positive and direct correlation between learners' achievement and using contextualization strategy.

Gillam and Reeceb (2012) investigated whether a new contextualized language intervention (CLI) or an existing decontextualized language intervention (DLI) caused children's language and narration in comparison to a no-treatment condition in greater changes. Effect size analyses suggested that the CLI group was better than the DLI group. In addition, there was a relationship between the interventions and statistically significant gains on sentence and discourse-level measures when compared to a no-treatment condition.

Rowe (2013) studied decontextualized language on the preschool children. The parents were asked to teach vocabulary to their children by decontextualization strategy. The findings indicated that the children who were given some narratives and explanations about the past and future events by their parents commonly achieved better vocabulary mastery.

Kermani and Seyedrezaei (2015) investigated the effect of contextualized vocabulary teaching on learners' vocabulary learning and retention at Azad University of Rasht,

Rasht, Iran. The experimental group received contextualized vocabulary training. Conversely, the control group perceived traditional definition-based vocabulary training. Statistically significant difference was found between the experimental and control group in mastering target vocabulary.

The present study aimed to investigate the effects of three VLSs (i.e., decontextualization, contextualization, and marginal glossing) on short-term and long-term retention of vocabulary knowledge of Iranian EFL learners. Therefore, the following research questions are addressed:

Q1: Are there any significant differences among contextualized, decontextualized, and glossing techniques in Iranian EFL learners' short-term vocabulary retention?

Q2: Are there any significant differences among contextualized, decontextualized, and glossing techniques in Iranian EFL learners' long-term vocabulary retention?

Methodology

Participants

Initially, eighty EFL male participants at intermediate level of proficiency, aged between 16–18, enrolled the study. Their native language was Azeri-Turkish. All participants were selected from Beheshty high School located in Nir, Ardabil, Iran. To have a homogeneous sample, the participants were selected from four intact classes with similar backgrounds. All participants had more than five years of English learning experience; none of whom, however, had already lived in an English speaking country. To ensure participants' homogeneity in terms of proficiency level, a proficiency test was administered. It is worth mentioning that of the original cohort, the data obtained from 11 participant were excluded due to their scores (lower than 15) on the tests. Then the participant was randomly assigned to one of the following groups: a control group (N = 16), a decontextualized group (N = 16), a contextualized group (N = 17), and a glossing group (N = 17) as a result, the final total number of participant decreased to 66 participants.

Instruments

Proficiency test

To assure the homogeneity of participants, they were given an adapted version of the Oxford Preliminary English test (PET), which is a simple test compared to TOEFL and is therefore more suitable for learners with intermediate level of proficiency. KR-21 was applied to measure its reliability indices which was 0.75. The listening part was excluded from the proficiency test for practicality considerations.

Reading material and target words

The reading material selected was the text represented in unit three of students' textbook entitled "memory". The reading text consisted of about 250 words. There was only one example for each the target word in the text and the examples were from all word categories. The learners were asked to respond a set of nine comprehension questions. The comprehension questions were given to ensure that the learners comprehend the meaning of the text rather than merely memorizing the target words.

Data collection Procedures

A week prior to conducting the treatment, the learners were questioned for age, years of studying English, and the courses attended. They also received the consent form and signed it. Then the proficiency test was administered to all 80 participants. On the basis of data obtained from the proficiency test, 66 participants were selected according to their scores (scores above 15) from all 80 students. Then, they were divided to four groups including a control group, a decontextualized group, a contextualized group, and a glossing group. All participants were 3rd grade of high school students with similar proficiency level, scores above 15. At the very first step, the researcher explained some important points about vocabulary in Persian language which lasted for one session. The explanations given by the researcher covered the crucial factors affecting vocabulary learning as well as the main reason to improve vocabulary knowledge. This session was conducted to draw the learners' interests and attention to importance of having a good grasping of vocabulary. In addition, the researcher introduced the components of contextualized strategy i.e., phrase, clause, sentence, and reading text and

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also explained how learners could learn new vocabulary by employing these contextual clues so that they could elaborate and define meaning of a word in context. The sessions were continued with the learning process. During the learning process the students were given the exercises related to the contextualization and vocabulary test.

Along with the contextualized group, the decontextualized group received a treatment including learning the same vocabulary items through rote memorization of word lists containing Persian equivalents of the words.

At the same time, the glossing group was taught vocabulary on the same reading text with a difference that this time the text was equipped with marginal glossing in L1. In line with the three experimental groups, the control group followed the usual strategy of vocabulary learning through which the meaning, synonyms, and antonyms of key words were explained by the teacher and the learners were asked to memorize them.

Finally, in order to have enough time for conducting the study and gaining the expected results, five sessions of treatment were allotted so

that the learners have enough time to practice and master these techniques. An immediate posttest was administered to all four groups to compare the improvement of vocabulary knowledge as a result of the treatment. Moreover, to assess the learners' long-term retention of vocabulary, after two weeks, a delayed posttest was administrated.

In the receptive part of the tests, one score was given to each correct answer and zero score to incorrect and unanswered questions. In the productive part, one score was given to each correct answer (Rouhi & Mohebbi, 2013). Each mistake was graded depending on the kind of mistake made by the learners; in case of morphological, grammatical, orthographic and lexicon-semantic errors, the score was .5 point (Rouhi & Mohebbi, 2013).

The data obtained from the proficiency test, pretest, and posttests, the data were analyzed by SPSS software version 24 different descriptive and inferential statistical tests were employed in the process of data analysis such as test of normality, Levene's test

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of homogeneity of variances, one-way ANOVA, and post-hoc Scheffe test. To serve the purpose of the study, the quasi-experimental design was employed.

Results

The data obtained from the proficiency test, pretest and posttests were analyzed using one-way ANOVA. Since they are prerequisite of ANOVA, the assumptions normal distribution of scores and homogeneity of variances of the groups were checked. The normality of the data was probed using skewness and kurtosis statistics and their ratios over the standard errors. As displayed in Table 1, the absolute values of the ratios of skewness and kurtosis over their standard errors were lower than 1.96. Thus it can be concluded that the data did not show any significant deviation from a normal distribution. As a result the assumption of normality was met. The assumption of homogeneity of variances is discussed when reporting the main results.

Table 1

Descriptive Statistics; Testing Normality of Data

Group		N	Skewness		Kurtosis			
			Statistic	Std. Error	Statistic	Std. Error	Ratio	
Contextualized	Homogeneity	17	-.004	.550	-0.01	-.227	1.063	-0.21
	Short	17	-.854	.550	-1.55	-.047	1.063	-0.04
	Long	17	-.560	.550	-1.02	-.410	1.063	-0.39
Decontextualized	Homogeneity	16	.636	.564	1.13	-.387	1.091	-0.35
	Short	16	-.796	.564	-1.41	-.148	1.091	-0.14
	Long	16	-.325	.564	-0.58	-.611	1.091	-0.56
Gloss	Homogeneity	17	-.264	.550	-0.48	.809	1.063	0.76
	Short	17	.018	.550	0.03	-.609	1.063	-0.57
	Long	17	-.233	.550	-0.42	-.492	1.063	-0.46
Control	Homogeneity	16	-.382	.564	-0.68	-.121	1.091	-0.11
	Short	16	-.172	.564	-0.30	-1.460	1.091	-1.34
	Long	16	.759	.564	1.35	-.288	1.091	-0.26

Table 2 represents the descriptive statistics and KR-21 reliability indices for the homogeneity test, short-term vocabulary test, and

long-term vocabulary test. As shown, the reliability indices for the three tests were .53, .64, and, .74 respectively.

Table 2

Descriptive Statistics and KR-21 Reliability Indices

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	KR-21
Homogeneity	66	7	20	14.43	2.846	8.099	.53
Short	66	7	20	14.26	3.230	10.433	.64
Long	66	6	20	14.19	3.708	13.753	.74

A one-way analysis of variance (ANOVA) was run to compare the mean scores of the groups in PET test to investigate whether or not they were

homogenous in their language proficiency before presenting the treatments. As represented in Table 3 the results of the Levene's test ($F(3, 65) =$

.765, $p = .518$) showed no significant differences. Therefore, the assumption of homogeneity of variances was met.

Table 3

Levene's Test of Equality of Error Variances; PET Test by Groups

		Levene Statistic	df1	df2	Sig.
Homogeneity	Based on Mean	.862	3	62	.466
	Based on Median	.765	3	62	.518
	Based on Median and with adjusted df	.765	3	60.782	.518
	Based on trimmed mean	.878	3	62	.457

Table 4 demonstrates the descriptive statistics for the groups' performance on PET test. The results indicated that mean scores of the contextualized ($M = 14.18$, $SD = 3$),

decontextualized ($M = 14.31$, $SD = 2.77$), gloss ($M = 15.15$, $SD = 2.37$) and control ($M = 14.06$, $SD = 3.31$) groups were almost the same for PET test.

Table 4

Descriptive Statistics; PET Test by Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Contextualized	17	14.18	3.005	.729	12.63	15.72
Decontextualized	16	14.31	2.774	.694	12.83	15.79
Gloss	17	15.15	2.370	.575	13.93	16.37
Control	16	14.06	3.311	.828	12.30	15.83
Total	66	14.43	2.846	.350	13.73	15.13

As displayed in Table 5, the results of one-way ANOVA ($F(3, 62) = .491$, $p = .690$, partial eta squared = .023)

were not statically significant. This implies that the four groups were equal

in their general language proficiency before participating in the present study.

Table 5

One-Way ANOVA; PET Test by Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.215	3	4.072	.491	.690
Within Groups	514.228	62	8.294		
Total	526.443	65			

Figure 1 illustrates the means scores obtained from the Pet test for each

group. As seen, all groups almost performed equally in the proficiency test.

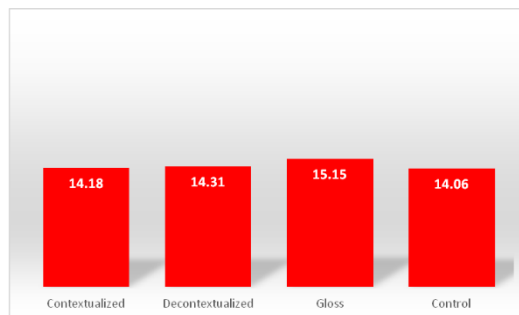


Figure 1. Means on PET test by groups

The first null-hypothesis stated that there no significant difference between the four groups' performance on the short-term test of vocabulary. A one-way ANOVA was run to compare the mean scores of the groups obtained from the short-term vocabulary test in

order to test the first null-hypothesis. As represented in Table 6, the results of the Levene's test ($F(3, 65) = 1.11, p = .350$) showed no statistically significant difference between the groups' variances for short-term vocabulary test.

Therefore, the assumption of homogeneity of variances was met.

Table 6

Levene's Test of Equality of Error Variances; Short-Term Vocabulary Test by Group

		Levene Statistic	df1	df2	Sig.
Short	Based on Mean	1.539	3	62	.213
	Based on Median	1.115	3	62	.350
	Based on Median and with adjusted df	1.115	3	61.018	.350
	Based on trimmed mean	1.597	3	62	.199

As displayed in Table 7, the mean scores obtained for the contextualized group ($M = 15.59$, $SD = 3.07$) surpassed those of the decontextualized group ($M = 14.38$, SD

$= 2.49$), gloss group ($M = 13.76$, $SD = 3.45$), and control group ($M = 13.25$, $SD = 3.57$). Clearly, the contextualized group obtained the highest mean while the control group had the lowest.

Table 7

Descriptive Statistics; Short-Term Vocabulary Test by Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Contextualized	17	15.59	3.078	.747	14.01	17.17
Decontextualized	16	14.38	2.493	.623	13.05	15.70
Gloss	17	13.76	3.456	.838	11.99	15.54
Control	16	13.25	3.573	.893	11.35	15.15
Total	66	14.26	3.230	.398	13.46	15.05

Table 8 represents the results of one-way ANOVA ($F(3, 62) = 1.67$, $p =$

$.183$, partial eta squared = $.075$). As seen, no statistically significant difference was

found between the mean scores of the groups in the short-term vocabulary test.

Accordingly, it can be concluded that the first null-hypothesis was supported.

Table 8

One-Way ANOVA; Short-Term Vocabulary Test by Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	50.695	3	16.898	1.670	.183
Within Groups	627.426	62	10.120		
Total	678.121	65			

Figure 2 depicted the means scores obtained from the short-term vocabulary test for each group. As seen, differences were seen between the mean

scores of the groups. As discussed, the differences found were not statistically significant, however.

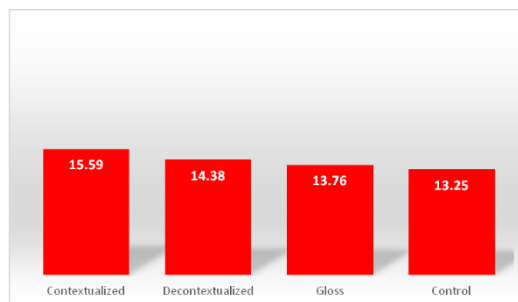


Figure 2. Means on short-term vocabulary test by groups

The second null-hypothesis said that there were no significant differences between the four groups' means on the long-term test of vocabulary. As indicated earlier, a one-way ANOVA

was performed to compare the mean scores of the groups obtained from the long-term vocabulary test. As shown in Table 4.9, the results of the Levene's test ($F,3, 65) = .505, p = .681$) revealed no

statistically significant differences between the groups' variances for long-term vocabulary test. Therefore, the

assumption of homogeneity of variances was met.

Table 9

Levene's Test of Equality of Error Variances; Long-Term Vocabulary Test by Group

	Levene Statistic	df1	df2	Sig.
Based on Mean	.614	3	62	.609
Based on Median	.505	3	62	.681
Based on Median and with adjusted df	.505	3	55.062	.681
Based on trimmed mean	.607	3	62	.613

As represented in Table 10, the mean scores obtained for the contextualized group ($M = 15.88$, $SD = 2.89$) surpassed those of the decontextualized group ($M = 15.38$, $SD = 2.77$), of gloss group ($M = 14.56$, $SD =$

3.25), and control group ($M = 10.81$, $SD = 3.82$) groups. Accordingly, the contextualized group had the highest mean while the control group obtained the lowest mean scores.

Table 10

Descriptive Statistics; Long-Term Vocabulary Test by Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Contextualized	17	15.88	2.891	.701	14.40	17.37
Decontextualized	16	15.38	2.778	.694	13.89	16.86
Gloss	17	14.56	3.254	.789	12.89	16.23
Control	16	10.81	3.820	.955	8.78	12.85
Total	66	14.19	3.708	.456	13.28	15.10

The results of one-way ANOVA ($F, 3, 62 = 8.29, p = .000$, partial eta squared = .286), shown in Table 11, a statistically significant difference was observed between the mean scores of the groups for long-term vocabulary test. As a result, the second

null-hypothesis (there was no significant differences among the effects of contextualized, decontextualized, and glossing technique on Iranian EFL learners' long-term vocabulary retention) was rejected.

Table 11

One-Way ANOVA; Long-Term Vocabulary Test by Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	256.026	3	85.342	8.295	.000
Within Groups	637.890	62	10.289		
Total	893.916	65			

Since the result of the One-way ANOVA revealed a significant difference among the groups' performance on the long-term vocabulary test, a post-hoc Scheffe test was run to probe where precisely the difference laid. As represented in table 12, the following results were obtained:
A: The contextualized group ($M = 15.88$) significantly outperformed the control

group ($M = 10.81$) on the long-term vocabulary test ($MD = 5.07, p = .000$).

B: The decontextualized group ($M = 15.38$) significantly outperformed the control group ($M = 10.81$) on the long-term vocabulary test ($MD = 4.56, p = .002$).

C: The gloss group ($M = 14.56$) significantly outperformed the control group ($M = 10.81$) on the long-term vocabulary test ($MD = 3.74, p = .015$).

D: There was no statistically significant difference between the contextualized ($M = 15.88$) and the decontextualized ($M = 15.38$) groups' means on the long-term vocabulary test ($MD = .507, p = .976$).

E: There was no statistically significant difference between the contextualized ($M = 15.88$) and the gloss ($M = 14.56$)

groups' means on the long-term vocabulary test ($MD = 1.32, p = .697$).

F: There was no statistically significant difference between the decontextualized ($M = 15.38$) and the gloss ($M = 14.56$) groups' means on the long-term vocabulary test ($MD = .813, p = .912$).

Table 12

Scheffe's Post-Hoc Comparison Tests; Long-Term Vocabulary Test by Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	Decontextualized	.507	1.117	.976	-2.70	3.72
Contextualized	Gloss	1.321	1.100	.697	-1.84	4.48
	Control	5.070*	1.117	.000	1.86	8.28
Decontextualized	Gloss	.813	1.117	.912	-2.40	4.02
	Control	4.563*	1.134	.002	1.30	7.82
Gloss	Control	3.749*	1.117	.015	.54	6.96

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

Figure 3 demonstrated the means scores obtained from the long-term vocabulary test for each group. As seen, there are

differences between the mean scores of the groups.

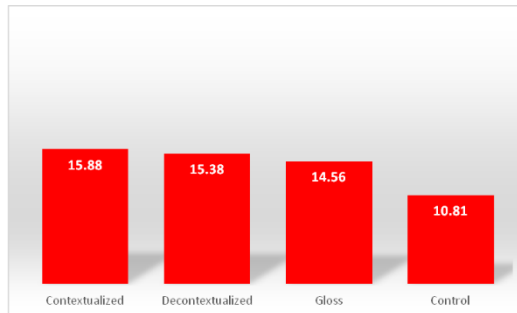


Figure 3 Means on long-term vocabulary test by groups

Discussion

According to the analyses represented, the first null hypothesis was supported. The findings of the study suggested that there was no statistically significant difference among the effects of the contextualized, decontextualized, and glossing techniques on Iranian EFL learners' short-term vocabulary retention. Although, due to the mean scores, there were minor differences in the four groups' performance in which the contextualized group's mean score was larger than the other groups, the observed difference was not significant enough to show the superiority of one special group over the others in term of short-term vocabulary retention.

Despite obtaining such an unexpected finding which is in contradiction to the findings of the other

studies conducted in this domain (e.g., Glonka et al., 2015) there is no doubt about the effectiveness of contextualized learning and glossing technique. The result of the study was in disagreement with Golonka et al. (2015) who reported positive effect of lexical context on native English speakers' capability to learn L2 vocabulary. Overall, the study urged that learning vocabulary from reading for comprehension was less effective than learning from vocabulary-focused decontextualized or semi-contextualized tasks.

Due to the results of data analyses, the second null hypothesis was rejected. As represented earlier, a statistically significant difference was observed between the experimental groups and control group's long-term vocabulary retention. In other words, the experimental groups outperformed the

control group. The results also revealed that vocabulary knowledge could be developed through these strategies. Moreover, the contextualized group outperformed the glossing and decontextualized groups and the glossing group in turn outperformed the decontextualized group. It showed that contextualized vocabulary learning strategy was more effective than decontextualized vocabulary learning strategy and glossing technique in enhancing vocabulary understanding because it provided greater effect on the learners' long-term retention of vocabulary.

The findings of the present study are in harmony with Siang Wan (2016) who showed that the contextualized technique boosted the learners' memory by surrounding clues as well as improving vocabulary recognition. The results of the present study are also in agreement with the findings of some research (e.g., Boers et al., 2017; Chen & Yen, 2013; Chen, 2016; Farvardin & Biria, 2011; Jacobs et al., 1994; Kim & Gilman, 2008; Nation, 2001; Yoshii, 2006; Yoshii, 2014).

Conclusion

The aim of the present was to have a comparative study of glossing, contextualized, and decontextualized instruction in Iranian EFL learners' short-term and long-term vocabulary retention. With regard to the findings, as discussed in the chapter four, the finding of the present study lent weight to the positive effect of contextualized, decontextualized, and glossing techniques on enhancing learner's 'short-term and long-term retention of vocabulary. Although, contrary to my expectation, no significant difference was observed among the groups with regard to research question1.

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