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A Comparative Study of the Effectiveness of Unimodal versus Bimodal Input Sources on Enhancing Iranian Intermediate EFL Learners' Lexical Collocations

Gholamhossein Shabani[1]

1. Department of English Language, RoA.C., Islamic Azad University, Roudsar, Iran. Email:Gholamhossein.Shabani@iau.ac.ir

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ABSTRACT

Objective: Learning collocation is learning how to communicate idiomatically. The storage of collocations enables nonnative speakers to add a special flavor to their speech. This study sought to examine the impact of teaching two various modes of reading manipulation, including reading-while-listening versus reading-aloud on Iranian intermediate EFL learners' enhancement in lexical collocations.

Method: For this purpose, 50 L1 Persian EFL students were selected out of 75 students through administrating the Comprehensive English Language Test (CELT), as the standard proficiency test. They were studying English as the foreign language whose age range was 19-27. They were then assigned to two comparison groups involving Reading-while-Listening Group (RWLG) and Reading-Aloud Group (RAG). Both comparison groups were pretested through a piloted lexical collocation test. Then both groups were instructed through a ten-session treatment. The RWLG was treated through reading while listening mode, via which the participants read and listened to the target collocations throughout texts simultaneously, and the RAG was instructed through reading aloud the target collocations presented through texts. Upon the completion of the treatment, both groups were posttested through the same version of lexical collocation test to check the effectiveness of the treatments.

Results: The finding of the study through running paired-samples and independent samples t-tests indicated the two reading modes of input were effective on the learners' enhancement in collocation gains, but there were significant differences in the lexical enhancement of the two groups. The impact of reading-while-listening mode on the learners' enhancement in lexical collocation far outweighed that of the reading-aloud mode.

Conclusion: The implications and recommendations were also presented. The findings of the study are valuable in EFL contexts and have pedagogical implications for L2 teachers and L2 learners.

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1. Introduction

Collocations are referred to as a type of assembled chunks and multi-unit words that are located together and co-occur in predictable patterns in speech and writing. Gablasova, Brezina, and McEnery (2017) defined collocations as two-word combinations whose frequency of co-occurrence is statistically and semantically different from the single or individual words. Nation (2001) viewed collocations as a group of words that belong together either because they commonly occur together, or because the meaning of the group is not obvious from the meaning of the parts.

Tanihardjo (2018) introduced a classification of different collocations, involving two main types of grammatical collocations and lexical collocations. According to this classification, there are eight main types of grammatical collocations and seven types of lexical collocations. Collocations, in particular, lexical collocations which are frequently used by EFL learners in speaking and writing, are as an integral component of language learning. It is, therefore, very important for teachers and learners to take them into account in the process of language learning. By promoting their knowledge of collocations, learners (Dang, Lu, & Webb, 2022) can gain a wider capacity for understanding the practical usage of a wider variety of lexical components which co-occur, though which they can extend their lexical competence along with their overall communicative competence as well. Because collocations are the natural extension of a lexical domain of language focus, teaching collocations (Toomer & Elgort, 2019) is an important attempt of any language course and effective in raising learners' awareness; the reason for this claim is that teaching collocations (Boers, 2020) enables learners to enhance their recognition of the form, meaning and use of discrete lexical items and know how they are commonly related to other items.

According to Crossley, Salsbury, and McNamara (2014) and Azadegan Dehkordi and Aghajanzadeh Kiasi (2023), collocations are crucial for foreign language (L2) proficiency, but they cause difficulties and problems for the EFL learners, arising from a number of factors. Boers (2020) refers to the lack of salience or prominence given to collocations in the input, to which learners are exposed, because of their high-frequency component words. This is one source of difficulty with the gain of new lexical collocations. Some researchers, namely, Meunier (2012), Vu and Michel (2021) claim that this failure is rooted in the lack of sufficient attention or inadequate attention paid to collocations in L2 learning contexts mainly in L2 classrooms and textbooks as instructional sources.

Collocations can be learned incidentally through exposing learners to a variety of meaningful input such as reading, listening, and viewing, the practical results of which have been reported by Dang, Lu, and Webb (2022), Peters, Puimège, and Szudarski (2023), Vu and Peters (2022b, 2023), Vu, Noreillie, and Peters (2026), Webb and Chang (2022). Collocations can be learned and enhanced explicitly through the multi-unit items in contexts which are rich enough to supply clues to learners to gain meaning, or through intentional multiple exposure to the items (Schmitt & Schmitt, 2020). There are evidences of the investigation of different modes of reading and their effects on collocation gains.

1.1 Statement of the Problem

Jiang (2009) and Levitzky-Aviad and Laufer (2013) point out to EFL learners' insufficient recognition and, in most cases, lack of awareness of the importance of collocational knowledge which hinder their precise use of collocations in both their own production and comprehension of language. Because of this, they consider words as separate single units, accordingly, do not store them as collocations (Lewis, 2000). This affects language production and comprehension negatively because they cannot recall them as collocations, resulting in lack of fluency and probably intelligibility. Sadeghi and Panahifar (2013) claim that most Iranian EFL learners show serious problems with the production of collocational patterns. Such inappropriate multi-word units and erroneous use and production of expressions are not due to the learners' poor mastery of grammar or lexis. As shown by Koosha and Jafarpour (2006), Iranian EFL learners' failure in producing and comprehending appropriate collocations, despite having sufficient lexical or grammatical knowledge arises largely from their lack of appropriate collocational knowledge, the insufficient

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emphasis on collocational patterns in their textbooks and the type of instructions they receive. In addition, such multi-word expressions have not usually been the focus of teaching.

1.2 Objectives of the Study

The main purpose and primary focus of the present study was to shed light on the impact of two modes of reading manipulation (i.e., reading aloud or loud reading versus reading-while-listening tasks) on Iranian intermediate EFL learners' lexical collocation knowledge as they encounter various contexts. There is limited empirical evidence about the effect of reading aloud (also "loud reading" or "oral reading") and reading-while -listening on L2 collocation gain as attested by Vu and Peters (2025). These two variables and their potential interaction on each other have not been investigated thoroughly in the Iranian context yet. So, in response to these research gaps, the present study intended to fill this gap and shed more light on this by finding any possible effect of reading aloud and reading-while listening tasks on the Iranian EFL learners' lexical collocation knowledge development. Therefore, considering the independent and dependent variables and their potential interaction, the following null hypotheses were formulated in this study:

H01: Reading aloud mode does not affect Iranian intermediate EFL Learners' achievement in lexical collocations.

H02: Reading-while-listening mode does not affect Iranian intermediate EFL Learners' achievement in lexical collocations.

H03: There is no significant difference in the lexical collocations gain of Iranian intermediate EFL learners as treated by reading aloud and reading-while-listening modes.

In light of the research hypotheses, the three research questions were posed to be examined and answered as follows.

RQ1: Does reading aloud input mode affect Iranian intermediate EFL Learners' achievement in lexical collocations?

RQ2: Does reading-while-listening input mode affect Iranian intermediate EFL Learners' achievement in lexical collocations?

RQ3: Are there any significant differences in the lexical collocations gain of Iranian intermediate EFL learners as treated by reading aloud and reading-while-listening modes of input?

2. Review of the Literature

2.1 Main Approaches to Teaching/Learning Collocations

The main approaches to teaching collocations are summarized by Pellicer-Sánchez (2015) as incidental learning, explicit instruction, and independent strategy development. Instructors are supposed to draw learners' attention to the importance and effective nature of these approaches and address them in the language classroom for learners so that they can have the most varied opportunities to deal with their collocation development. Incidental learning is mostly fulfilled through exposing learners to extensive reading activities outside of the classroom and listening activities. Incidental mode of vocabulary learning or multi-unit words (lexical collocations), as stated by Webb, Newton, and Chang (2013), refers to a sort of learning that occurs when learners' attention is focused on gaining and understanding messages with no particular intention to learn a set of words. The majority of studies on incidental vocabulary learning have focused on the acquisition of new words from reading. Studies in this area have revealed that new words and expressions can be acquired incidentally from reading (Brown, Waring, & Donkaewbua, 2008; Ellis, 1999; Pellicer-Sánchez, 2015; Pellicer-Sánchez & Schmitt, 2010). Incidentally acquiring collocations stands in contrast with intentional learning, through which learning occurs consciously and when there is a particular intention to learn a set of items (Nation, 2001).

Explicit instruction, in contrast, aims to involve the students in direct, form and meaning focused activities whose purpose is to enhance their awareness of the lexical items being taught. This mode of instruction, in fact, keeps learners more cognitively engaged in the words they intend to learn (Cooper, 2016; Patro, 2018). Boers, Demecheleer, Coxhead, and Webb (2014), Kasahara (2011), Laufer and Girsai (2008), Lindstromberg and Boers (2008a), and Peters (2014),

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Krishnan, Watkins, and Bishop (2017) have shown the effectiveness of explicit instruction on L2 learners gain in collocations. By means of explicit instruction of L2 collocations, the newly presented lexical items or collocations are not given in isolation and do not require rote memorization, but rather the intended items to be learned are presented with clues in context and through multiple exposure (Decarrico 2001). This sort of instruction, according to Biria and Khodaeian (2016), Webb, Yanagisawa, and Uchihara (2020), Karbakhsh Ravari, Nakhaee Ravari, and Rabani (2025), supplies the learners with varied opportunities to focus on the form, meaning and use of the targeted items many times through comprehensible input and provides them with more fruitful chances to intake the items.

Two effective techniques for teaching L2 collocations are collocational grids and concordancing which play as consciousness-raising tools. Collocation grid is a tool for the effective collocation learning helping the learner to have a clear reference map of the collocations they intend to learn by matching the various words relating to each other and the possibility of the co-occurrence of different words of similar types. This technique, as mentioned by Mansouri and Safdari (2025), helps L2 learners make cognitive decisions about the proper collocations within the grid, and in this way, they are given the successful chance to attend which words commonly co-occur to form proper collocations. Concordancing is another effective technique for the effective gain of collocations and as a valuable consciousness-raising tool providing L2 learners the opportunity to notice how a given word is used in context. The study of collocations has taken a significant leap forward with the advent of concordancing. Li (2017) maintains that concordancing is a particularly effective technique when it is used with an inductive approach in that it provides effective discovery learning possibilities. Through the use of concordancing, as Daskalovska (2015) suggested, instructors involve learners in consciousnessraising contexts in which they can raise their awareness of vast chunks of naturally occurring collocations in spoken and written language. Independent strategy development of collocations deals with the practice of skills for learning vocabulary such as guessing meaning from context and effective use of dictionaries.

2.2 Empirical Studies on Reading-while-listening Mode

A number of experimental researches have been conducted on the effects of reading-while-listening mode of instruction on collocation learning, the most recent ones of which were presented as follows:

As a practical sample of experiment, Webb, Newton, and Chang (2013) scrutinized the effectiveness of reading-while- listening mode of instruction on EFL learners' incidental acquisition of collocations. They reported positive points about the effectiveness of this mode of instruction on collocations. Through the experiment, the intended EFL learners simultaneously read and listened to materials which contained 18 verb-noun collocations. Through the results obtained, the researchers revealed two sorts of findings: The results indicated a significant increase in the EFL learners' enhancement in receptive knowledge of the target collocations. The findings, in addition, showed collocation gains in the learners' productive knowledge of form, productive knowledge of meaning, and receptive knowledge of meaning.

Dang, Lu, and Webb (2022) investigated the learners' gains in collocations through five input modes of (a) reading, (b) listening, (c) reading while listening, (d) viewing, and (e) viewing with captions. The results revealed that various input modes of instruction examined in this study were all effective on enhancing learners' lexical collocation knowledge, but there were significant differences among them. The researchers reported positive evidence of the effectiveness of instructing learners by reading-while-listening manipulation of input on their enhancement in lexical collocations.

Peters, Puimège, and Szudarski's (2023) experiment titled repetition and incidental learning of multiword units was designed and completed as a replication of Webb, Newton, and Chang's (2013) area of study on the effects of reading-while-listening input and repetition on collocation learning. The findings of their experiment were found to have similar results as reported by Webb, Newton, and Chang's (2013). The results were indicative of the positive effects of repetition (frequency of exposure to the input) and reading-while-listening manipulation of input on enhancing collocation knowledge.

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Vu, Noreillie, and Peters (2026) investigated the impact of two various modes of reading-while-listening and captioned TV viewing manipulation of input on incidental collocation learning and predictors of learning gains among 80 Vietnamese English language learners as a foreign language. The findings of their experiment showed the positive impact of these two inputs of instruction on the enhancement of lexical collocations, evidencing the superior effects of reading-while-listening mode to the captioned TV viewing.

Another study of similar nature was done and reported by Webb and Chang (2022). Through the experiment in an EFL contest, the quasi-experiment design shed light on L2 collocation gain treated by three different modes of input manipulation, involving reading, listening, and reading while listening. The participants of this study included one hundred thirty-eight college students as EFL learners in the EFL context of Taiwan. The results evidenced the effective aspects of the three different modes and reading-while- listening condition had superior effects to the other

Vu and Peters (2022b) scrutinized the effect of three different manipulation of reading input, i.e., reading-only, two conditions on collocation gains, reading-while-listening, and reading with textual input enhancement (i.e., underlining) on pre-intermediate EFL learners' achievement in incidental lexical collocations. The experiment was conducted on one hundred pre-intermediate learners of English as a foreign language. The findings of the experiment revealed that the different modes of reading examined were effective on the learners' enhancement in collocation gains, but there were significant differences among them in terms of their impact on collocation enhancement.

2.3 Empirical Studies on Reading aloud (Loud Reading) Input

To find out the impacts of reading modes on collocation learning, Vu and peters (2025) conducted an experiment by involving three different reading input, i.e., reading-only, reading-while-listening, and reading aloud. The study targeted at pre-intermediate EFL learners in Vietnamese context. Through the findings of the experiment, the researchers indicated the positive impact of the different reading modes on the learners' collocation learning gains. It was also showed that the two modes of reading (reading-while-listening and reading aloud) resulted in higher learning gains in collocations that the reading-only mode.

A number of empirical studies have pointed to the positive effects of reading aloud manipulation of input on incidental collocation learning, the most salient of which are presented by Gibson (2008), MacLeod, Gopie, Hourihan, Neary, and Ozubko (2010), Ozubko, Hourihan, and MacLeo (2012), D'Mello and Mills (2021), Icht and Mama (2022). These studies claim that vocalization or vocal production of items play a significant role in learning L2 words or phrase. It is also claimed that the vocal production of items provided by reading aloud mode facilitates long-term memory and retention of words, sentences, or even complex materials at both recognition and recall levels.

3. Methodology

3.1 Design of the Study

The current quasi-experimental study employed pretest-posttest comparison group design. The independent variable of the study was reading manipulation including two modes of reading-while-listening and reading aloud and the dependent variable was enhancement in lexical collocations. All requirements of homogeneity, pretest-posttest, randomization, and treatment for the comparison groups were taken into consideration in the current study.

3.2 Participants

The participants in this study were 50 intermediate L1 Persian EFL students majoring in English Translation at the Islamic Azad University, Tonekabon branch, Iran, with the age range of 19 to 27. To ensure the homogeneity of the participants, the Comprehensive English Language Test (CELT), as the standard proficiency test, was administered to 75 students, out of whom 50 (30 males and 20 females) were selected based on the results of the test. The scores which stood one standard deviation above and one standard deviation below the mean score were selected as the criterion for

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determining participants' homogeneity. Then, they were randomly assigned to two equal 25-person comparison groups nominated as RWLG and RAG.

3.3 Instruments and Materials

The instruments and materials used in the current study were as follows:

3.3.1 The CELT test

The Comprehensive English Language Test (CELT), as the standardized proficiency test, was used to determine the participants' homogeneity and select homogenized groups. It comprised two sections including vocabulary and reading comprehension in multiple-choice-item form.

3.3.2 Pretest and Posttest of Lexical Collocation

The pretest of lexical collocation comprised 40 multiple-choice items (recognition type). The lexical collocation test was constructed based on two original collocation sources entitled English Collocation in Use-Intermediate (McCarthy & O'Dell, 2008) and English Collocations in Use – Advanced (O'Dell & McCarthy, 2088). The same version of vocabulary multiple-choice-item test, with rearrangement of some items, was administered as posttest to the two comparison groups.

3.3.3 Pilot Study

The test on lexical collocation, used as the pretest and posttest to the two comparison groups of this study, was examined and purified through a pilot study. To do so, a lexical collocation test consisting of 70 multiple-choice items was administered to 20 L1 Persian EFL students majoring in English Translation and having similar characteristics as those of the target groups. Through the students' performance of the test, the poor items of the test were deleted from the test using the psychometric characteristics of the items such as item facility, item discrimination, and choice distribution, based on which a 40- multiple-choice-item collocation test was established for the pre-test and post-test purpose.

3.3.4 The material for Teaching to the Comparison Groups

The material chosen and presented to instruct the two comparison groups as the treatment comprised 20 passages on lexical collocation from the original collocation source entitled English Collocation in Use-Intermediate (McCarthy & O'Dell, 2008). Each sample of text covered eight to ten lexical collocations. The whole texts were chosen to be in equal length and have equal numbers of novel collocations.

3.4 Procedure

Initially, to keep the homogeneity of the participants in the current study, the CELT, as the standard proficiency test, was administered to 75 L1 Persian EFL students, through which 50 were selected as the target participants to serve the purpose of the research work. According to the results of the proficiency test administration, the participants whose scores fell one standard deviation above and below the mean score (i.e., mean$\pm$1), were determined as the target participants. The participants were divided into two equal groups as RWLG and RAG, each comprising an equal number of 25 students. Following that, the two comparison groups were exposed to a piloted test of collocations as the pretest. The lexical collocation pretest comprised 40 multiple-choice items and the time allotted to the participants to answer it was 40 minutes.

Then, the two comparison groups were treated by their required modes of instruction according to the design of the current study for the same period of time through the same material and based on the same methodology. The RWLG was instructed through reading-while-listening manipulation, through which the participants of this group were required to read the target collocations, presented through the text, and listen to them simultaneously. To do this, the

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learners read the novel lexical collocations within the text and listened to its audio version at the same time. Reading and listening practices of each text with the purpose of learning the newly presented lexical collocations were simultaneously carried out. The treatment period was totally designed to cover ten complete sessions, each of which lasted 60 minutes. During each session of treatment, two pieces of reading texts of equal length and equal number of target collocations were instructed by the researcher. The participants performed reading in individual sessions in the reading mode and their reading time was monitored. They were instructed to focus on the content of the material. They were not allowed to use mobile phones or dictionaries during the experimental sessions. Whenever possible and necessary, they asked the researcher for the clarity of the unknown collocations within the text. The meaning of some unknown new words and expressions, whenever and wherever needed, was clarified by definition provision or synonym replacement offered by the researcher.

The participants in the RAG were treated within the same time period, through the same reading materials but via a different mode of reading manipulation. Through reading aloud mode, learners read a text out loud. It was ensured that the time allotment on performing this task on instructing lexical collocations was similar. Two pieces of reading texts embedded with equal number of lexical collocation were presented within any single session of treatment. Like the former comparison group, the participants were treated through ten sessions, each of which lasted 60 minutes. The students took the English lessons two sessions every week. The learners in this comparison group read out the reading texts with embedded collocations aloud with focus on the material content and no use of electronic devices and dictionaries. The teacher as the researcher supplied supplementary help with the clarification of some unknown target collocation in the texts.

In week 5, as the last session of treatment, both the RWLG and RAG took the lexical collocation posttest, which was the same as the pretest but with a rearrangement of some items in order to reduce and remove the probable test-retest effects.

3.5 Data Analysis

The collected data were entered into the SPSS 16.0 for further analysis. Two Paired-samples t-tests and an Independent-Samples t-test were run to test the null hypotheses of the study and the alpha level for significance testing was set at .05.

4. Results

The account and description of the statistical analyses which were performed to test and answer the null hypotheses and examine the research questions were illustrated through the following tables.

Table 1. Descriptive statistics of the participants' scores on the proficiency test (CELT)

N	Mean	Minimum	Maximum	Range	Variance	Std. Error of Mean
50	94.35	21.00	145.00	133.00	2680.14	4.96

The proficiency test (CELT) was administered as a homogeneity test to 75 L1 Persian EFL students, majoring in English as the foreign language, at intermediate level, out of whom 50 were selected as the target participants to serve the purpose of the study. The mean score of the participants was 94.35 and those students whose score fell within one standard deviation above and below the mean were selected as the participants of the study.

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Table 2. Result of the normality test

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Collocations: Equal Variances Assumed	.05	.68	2.54	48	.005	1.73	.58
Equal Variances not assumed			2.54	47.22	.005	1.73	.58

With respect to the Levene's Test for Equality of Variances, it was revealed that the variance of participants in the current study was normal (F = 0.05), Sig. = .68 > .05).

4.1 Investigating the First Research Question

The first research question asked if the reading-aloud mode impacts Iranian intermediate EFL learners' enhancement in lexical collocations. To answer this question and examine the related research null hypothesis, a Paired-Samples t-test was conducted, the descriptive statistics of which were represented in Table 3.

Table 3. Descriptive statistics of paired-samples t-test for RAG

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PosttestRAG	14.12	25	2.38	.40
	PretestRAG	13.20	25	2.52	.45

As shown in Table 3, the mean score of reading-aloud group (RAG) in pretest was 13.20 but in the posttest was 14.12. So the participants' lexical collocation gains after the related treatment was positive. This clue is considered an indicator of the rejection of the null hypothesis. In addition, standard deviation (Std. Deviation) for the posttest in this group was less than that of the pretest. This is indicative of less variability among reading-aloud group's posttest scores than that of the pretest. These two statistical clues (mean score and Std. Deviation) are in support of the group's enhancement in lexical gains from pretest to the posttest. Likewise, the inferential data are given in Table 4 below.

Table 4. Paired –samples t-test (RAG)

		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	PosttestRAG - PretestRAG	.88	1.89	.33	2.54	29	.01

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As shown in Table 4, there is a significant difference, t(25)= 2.54, p= .01), between the pretest-posttest mean scores of RAG. Therefore, the first null hypothesis of the study, which suggested that reading aloud mode of task does not impact Iranian intermediate EFL learners' lexical collocation gain, is rejected.

4.2 Investigating the Second Research Question

The second research question asked whether the reading-while-listening mode of manipulation impacts Iranian intermediate EFL learners' enhancement in lexical collocations. To answer this question and to examine the related research null hypothesis, a Paired-Samples t-test was run. The descriptive and inferential results were illustrated in Table 5.

Table 5. Descriptive statistics of RWLG

		Mean	N	Std.Deviation	Std. Error Mean
Pair 1	PosttestRWLG	15.92	25	2.11	0.36
	PretestRWLG	13.58	25	2.44	0.45

Table 5 shows that the posttest mean score (15.92) of RWLG was more than the pretest mean score (13.58). The standard deviation for the posttest was less than the pretest. This may give an image of less variability among the group's posttest scores compared to its pretest scores. In order to show whether there was a significant difference between the pretest and posttest mean scores of the group, the results of Paired-Samples t-test are presented in Table 6.

Table 6. Descriptive statistics of paired differences (RWLG)

		Paired Differences					
		Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	PosttestRWLG - PretestRWLG	2.23	.64	.12	9.94	24	.00

As shown in Table 6, there is a significant difference, t (25)= 9.94, p= .00), between the pretest-posttest mean scores of the RWLG. Accordingly, it is inferred that reading-while-listening technique was effective on enhancing the participants' gain in lexical collocation. It is, therefore, concluded that the second hypothesis of the study is rejected.

4.3 Investigating the Third Research Question

To examine the third research question and its related null hypothesis, the researcher ran an Independent-Samples t-test. The schematic representation of the results was given in Table 7 below.

Table 7. Descriptive statistics for RAG and RWLG in the posttest

	ReadingMode	N	Mean	Std. Deviation	Std. Error Mean
Collocation	RWLG	25	15.92	2.11	.35
	RAG	25	14.12	2.42	.46

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As illustrated in Table 7, the mean of Reading-while-Listening Group (RWLG) in the posttest was 15.92, and that of the Reading aloud Group (RAG) was 14.12. The results showed that RWLG outperformed the RAG. Accordingly, the reading-while-listening mode was more effective than reading aloud manipulation in enhancing learners' gain of lexical collocations. Likewise, the standard deviation value for the RWLG, according to the table, is less than the other group, meaning that there was less variability in the scores of the participants treated through reading-while-listening manipulation. However, in order to find out whether there was a significant difference between the two groups' mean scores in the posttest, the results of the Independent-Samples t-test are presented in Table 8.

Table 8. Independent-samples t-test RAG and RWLG (in the posttest)

	Levene's Test for Equality of Variances		**t-test for Equality of Means**				
	F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**
Collocation. Equal Variances Assumed	.07	.74	2.94	48	.00	1.69	.53
Equal Variances not assumed			2.94	47.22	.00	1.69	.53

As Table 8 shows, there is a significant difference, t(48)= 2.94, p= .00, between RAG and RWLG. Therefore, the third null hypothesis of the study was rejected.

5. Discussion

The purpose of the current study was to investigate the degree of effectiveness of two modes of reading input, involving reading aloud versus reading-while-listening manipulation, on Iranian intermediate EFL learners' enhancement in lexical collocations The results of the study as a result of running the statistical operations of Paired-samples t-test and Independent-samples t-test revealed that teaching collocations through the medium of reading-while-listening was much more effective than reading aloud mode in enhancing the learners' gain in lexical collocation. The reading-while-listening mode, according to the findings of the study, resulted in higher learning gains than the reading aloud mode.

The findings of this study indicated that reading mode, in particular, the two reading manipulations investigated in the current research work, had significant effects on collocation learning among L1 Persian EFL students. The effectiveness of reading-while-listening manipulation on lexical collocation enhancement was reported to be more significant than the reading aloud manipulation. In this regard, the superior impact of reading-while-listening on EFL learners' enhancement in lexical collocations to the reading aloud mode was shown as a merit to be taken into consideration in EFL learning contexts. Accordingly, the findings of this study are in line with what Vu and Peters (2022b), Vu and Peters (2023), Webb and Chang (2020) claimed. They reported that exposing L2 learners to bimodal input improves and boosts their capacity of memory of the target collocations which are seen and heard simultaneously. They believe that reading-while-listening is manipulated by the simultaneous hearing and seeing of input whose superior impact on collocation appears more significant than reading-only mode. In addition, the superior effects of reading-while-listening mode are supported by the findings of the studies by Bybee (2002) and Lin (2012), the justification of which is that the auditory-aided input supplies phonologically-based cues that possess facilitative role in L2 learners' recognition and acquisition of collocations.

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The results of the current study, in addition, showed that reading-while-listening technique enhances learning gains and is beneficial for collocation enhancement. These findings are consistent with the positive aspects presented by Brysbaert (2025), Peters, Puimège, and Szudarski (2023), Vu, Noreillie, and Peters (2026), and Webb (2020), in that they claim L2 learners' lexical development as a result of larger amounts of exposure leads to cumulative effects on their vocabulary growth. The results of this research work, concerning the superior effects of reading-while-listening mode to other modes of reading, in particular reading aloud and reading-only, stand in consistence with Vu and Peters (2025), who revealed more positive effects of bimodal input simultaneously practiced by auditory and visual cues. Bybee (2002) and Lin (2012) argue for the particularly significant role played by the auditory input in reading-while-listening mode in that it draws L2 learners' attention to phonological features of collocations such as pauses, rhythm, intonation, and stress. These features cause L2 learners to notice collocations because of their phonological prominence. Some researchers such as Icht and Mama (2022), Gibson (2008), Ozubko, Hourihan, and MacLeod (2012) have showed the merits of reading aloud, arguing that vocalization or vocal production of vocabulary plays a significant role in learning L2 words or phrases and that reading aloud enables L2 learners to make and practice connections between graphemes and phonemes assisting enhancing word recognition, pronunciation, and acquisition.

Pu, Chang, and Wang (2024) investigated the effects of reading-only as a unimodal input mode and two different multimodal input modes including reading-while-listening and viewing with captions on pre-intermediate and upper-intermediate students' incidental collocation learning in the EFL context of China. The findings of their experiment were indicative of the efficacy of multimodal input modes over the unimodal mode in that the multimodal conditions outperformed their counterparts in terms of incidental collocation gains. Accordingly, the results of the current experiment support the findings of previous studies on adult EFL learners' incidental collocation learning by Pu et al. (2024) and provide empirical evidence to support Mayer's (2020) multimedia learning theory that more than two input modes stimulating visual and auditory channels at the same time do not distract learners' attention.

To show the efficacy of the multimodal input condition (reading-while-listening mode) over the unimodal input source (reading aloud mode), Teng (2018) offers two possible reasons to account for why the bimodal source of instruction effectively enhances learning collocations. First, through the reading-aloud process, word combinations are not salient enough in that students may recognize collocations as two separate words, making it more challenging for them to notice and process them as a whole. In contrast, during reading material while listening when learners read and hear collocations simultaneously, there is often integration between two elements of collocations without hesitation or pause between the words. This feature helps learners process the collocation as a unit and enables them to make better use of the diverse sources of information to decode the meanings of collocations.

Therefore, the findings of this study, being in line with those of some other studies mentioned above, can be a good justification for putting more emphasis on teaching collocations through bimodal reading input in EFL classes. As it can be inferred from the findings of this study, the bimodal reading input, i.e., reading-while-listening mode can be more effective than the single-made reading input in learning collocations in EFL classrooms.

6. Conclusion

The findings of the study demonstrated that there were significant differences in the learners' enhancement in lexical collocation gains as a result of being treated by two modes of instruction, i.e. reading-while-listening versus reading aloud. It was concluded that the participants treated by reading-while-listening mode of instruction outperformed the group treated by reading aloud manipulation. The RWLG experienced higher gains in lexical collocations that the RAG. Overall, the multimodal condition led to greater learning gains in the intermediate learners' collocations.

According to the findings of the research, reading-while-listening mode which is characterized by being a bimodal provision of input, i.e., a combination of written and auditory input is effective for incidental collocation learning and has a facilitative role in enhancing learners' gain in lexical collocation. For this reason, this mode of reading can be an effective way of promoting L2 collocation knowledge (Vu & Peters, 2025).

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The findings of the study are valuable in EFL contexts and have pedagogical implications for L2 teachers and L2 learners. Collocations, as a combination of some words or multi-word units, are as an integral part of EFL learners' vocabulary development. L2 teachers need to seek and value any technique which has facilitative impact on enhancing and enriching lexical collocation knowledge. This study favors the adoption of reading-while-listening for fostering L2 collocation learning. Pedagogically, the findings of this study favor incorporating multimodal meaning-focused language input into incidental collocation learning. Multimodal input mode can be viewed as effective for both receptive collocation knowledge and also productive collocation knowledge depending on the proficiency level of learners. As such, L2 teachers and practitioners are supposed to tailor multimodal input based on the individual differences of language learners across different proficiency levels (Pu & Chang, 2023). L2 teachers can value an integration of reading-while-listening activities in educational contexts to expose learners to and engage them in bimodal practices such as reading and listening to audio excerpts or teacher-recorded readings of target texts. To deepen learners' understanding of the lexical collocations, teachers can have their learners to read and listen to audiobook or audio sources simultaneously. In addition, teachers can embark on post-reading vocabulary-focused tasks such as gap-filling or collocation matching exercises. The findings of the study are important and useful for L2 learners. L2 learners can enhance their exposure to collocations through resources with a combination of audio narration and visual text.

Some suggestions are worth mentioning for the future studies of similar nature. The current study was completed through the participation of 50 L1 Persian EFL students. The future studies are supposed to think of further participants to examine the effectiveness of reading modes on lexical collocation gain. The future researchers can examine and show the results of delayed posttest and the impact of learners' prior vocabulary knowledge on gaining collocations. The future studies of similar nature on various input modes could embark on incorporating a collocation in a wider variety of formats, namely, verb-preposition and adjective-noun types over an academic year. Likewise, exploring learners' perceptions through exposing them to different input modes by means of qualitative or mixed methods would yield to deeper insights into how learners engage with different input modes in incidental collocations learning settings.

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