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Original Research

Effects of Input Enhancement and Input Flooding on Learning English Collocations by Iranian Undergraduate EFL Students Through Corpus-based Instruction

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Abstract

Two well-known methods for improving students' writing skills are input flood and input enhancement. The latter suggests emphasizing certain linguistic elements to attract attention, whereas the former refers to providing students with a variety of sources to enhance their learning. This study examined the impact of input flooding and visual input enhancement on the learning of English collocations. The research used instructional materials based on a corpus and followed a nonequivalent quasi-experimental design. A pretest, posttest, and delayed posttest procedure was used to gather the necessary data. Seventy-five EFL students at an upper-intermediate level functioned as the participants of the study. They were divided into three groups: two experimental groups (E1 and E2) and one control group. Each group consisted of 25 students. The teaching materials included fifty collocations. The experimental groups were given input-based tasks. As part of their task, they had to search for collocations in the concordance lines. Only the textbook was used by the participants in the control group for learning collocations. Mixed-ANOVA, One-way ANOVA, and various post hoc Tukey tests were employed to analyze the gathered data. The study revealed that the simultaneous implementation of input enhancement and input flooding had a positive impact on the acquisition of English collocations. In addition, the results suggested that the understanding of collocations remained intact among all the experimental groups. This led the researcher to conclude that using input and corpus-based tasks were effective strategies for students to understand collocations. These findings could have important implications for ESP/EFL instructors. By using input-focused instructions, second-language educators can use creative techniques to improve their students' understanding of collocations.

Keywords*:* Concordance lines, Corpus-Based Instruction, English Collocations, Input Flooding, Visual Input Enhancement

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1. Introduction

Vocabulary learning is a crucial element in second language acquisition. Knowledge of a large number of words supports not only receptive but also productive knowledge of a language (Kivrak & Uygun Gökmen, 2019). One of the key aspects of vocabulary learning is learning the collocations. The significance of collocations in enhancing learners' language skills and communicative competence has been emphasized by researchers such as Bui (2021) and Sabanashvili et al. (2022). Understanding collocations is crucial for English learners as it enables them to speak and write English more naturally and accurately (O'dell & McCarthy, 2008). Moreover, learning collocations aids in expanding learners' English vocabulary. With the widespread use of technology in educational settings, several research studies (for example, Basal, 2019; Ramezanali & Faez, 2019) have examined the influence of diverse technological advancements on distinct language abilities and elements.

According to the existing literature (e.g., Sonbul & El-Dakhs, 2020; Toomer & Elgort, 2019), collocations are extremely important in the basic structure of every language. They hold a prominent position and serve a vital function. Toomer and Elgort (2019) argued that collocations play a crucial role in the understanding of semantic knowledge in all languages. For individuals learning a second language (L2), a limited range of collocations can pose considerable difficulties in acquiring other language skills.

Numerous research studies have investigated the application of technology in teaching and learning collocations. For example, Jamshidi and Zenouzagh (2020) utilized technology to make this process easier. In a study conducted by Basal (2019), it was found that using online tools such as online collocation dictionaries and concordance in teaching collocations resulted in much greater improvement when compared to a traditional approach. Furthermore, it has been proven that using concordances is a more efficient way of teaching collocations than the traditional method. The problem with collocations is that EFL learners cannot generate collocations properly. According to (Zughoul & Abdul-Fattah, 2003) the linguistic sequences of these chunks are not governed by rules and follow no prescribed pattern. Shah et al. (2020) further emphasize that the teaching and learning of collocations present a widespread challenge, and the limited understanding in this field makes it challenging for EFL learners to grasp collocations. Consequently, EFL learners must receive proper preparation and training to effectively produce collocations in the appropriate context. Ellis (2012) identified two types of input-based instruction: visual input

enhancement (VIE) and input flood (IF). VIE techniques, like underlining, italicizing, and boldfacing, aim to make the information more noticeable and increase learners' awareness (Schmidt, 2001). Conversely, the approach of Input Flood (IF) strives to improve learning by consistently presenting learners with L2 target words or structures, thereby facilitating L2 learning (Reinders & Ellis, 2009).

Theoretical frameworks that support input-based and corpus-based instruction are broadly similar and therefore it makes sense to investigate possible links between the two. Input-based instruction, as emphasized by Ellis (2012), concentrates on linguistic forms and guides us to teach and learn language components at different levels, including lexical, morphosyntactic, and sentence levels. This aligns with the foundation of corpus-based instruction, which is introduced by Hunston (2002) as a computer-based approach that requires language learners to make generalizations. Through briefly summarizing the rules and patterns of occurrence (input), the concepts of induction and inductive learning are brought to our attention.

According to the problem stated above, the general aim of this study is to examine the effect of input tasks on learning English collocations through corpus-based Instruction. In other words, this study aimed to examine the mixed effects of input flood and visual input enhancement through a set of corpus-based instructional materials for learning English collocations. The result of this study is expected to have theoretical significance as well as practical implications. For theoretical significance, the results of this study are expected to support some theories about collocation and the importance of collocation in learning teaching process. Additionally, this study examined the effect of input tasks on learning English collocations through corpus-based instruction. Few studies have systematically examined the role of these factors (input task and corpus-based materials) in EFL learners' acquisition of collocations. Therefore, the results of the study complement the previous research base and shed new light on the acquisition of collocations by EFL learners.

Previous research by Mahvelati (2019) and Oveidi et al. (2022) has emphasized the importance of implicit instructions in learning L2 collocations. However, there is a limited amount of research that investigated the impact of input flooding and input enhancement instructions on the acquisition of collocations. Additionally, concordance lines are used to increase exposure and meet the frequency of occurrence requirement. The goal of this study

is to determine which instruction method is more favorable for Iranian upper-intermediate learners.

2. Literature Review

2.1. Theoretical Considerations in Teaching Collocations

The significance of collocations in theories concerning the learning of a second language has been emphasized by various researchers (Mahvelati & Mukundan, 2012). McCarthy (1990) considered that lack of collocational knowledge is the most important sign of foreignness among foreign language learners. Because of its significance, language teachers and curriculum planners need to include collocation in the English language teaching syllabus. This recommendation has been made by various researchers (Bui, 2021; Mahvelati & Mukundan, 2012). Additionally, the significance of collocation within the framework of second language acquisition (SLA) and the extensive research carried out on collocation emphasize the necessity of incorporating it into the language curriculum. The Iranian context, which serves as an example of the EFL context, has witnessed extensive research in this field.

2.2. Previous Studies on Teaching Collocations in the EFL Contexts

2.2.1. The Role of Input Flooding and Input Enhancement

Numerous research (Asadi Amirabadi et al., 2014; Fang and Jiang, 2020; Oveidi et al. 2022) has demonstrated the beneficial effects of employing input enhancement techniques on learners' comprehension. In a study conducted by Asadi Amirabad et al. (2014), the researchers aimed to investigate the lasting impacts of input enhancement (IE) and input flooding (IF) on the progress of Iranian EFL learners. The individuals taking part in the study were segregated into three experimental groups, namely input flooding, input enhancement, and a blend of both methods. Following three weeks of instruction, a posttest was conducted, revealing that the group who received both IE and IF exhibited a higher level of performance in comparison to the other two groups. The comprehension and production of lexical collocations among Iranian EFL learners were examined with input-oriented and output-oriented activities in a study conducted by Oveidi et al. (2022). The participants were categorized into four distinct experimental groups, comprising sets of tasks separately focusing on input and output. It was observed that participating in these activities resulted in

a higher level of improvement in both comprehending and using lexical collocations. Fang and Jiang (2020) examined how text improvement affects advanced learners' acquisition of collocations. The results also suggest that the effectiveness of text enhancement remains constant under semantic transparency, suggesting that text enhancement can help learners learn collocations more effectively.

Different techniques have been used in several studies to teach L2 lexical collocations. For example, Naseri & Khodabandeh (2019) and Naserpour et al. (2020) have employed various explicit methods. In a study conducted by Naserpour et al. (2020), it was discovered that instructional exercises that require higher levels of involvement, such as short response and multiple-choice tasks, have a positive impact on the comprehension of English lexical collocations for EFL students. This improvement was observed in both the receptive and productive aspects of language learning. While explicit instruction can facilitate the acquisition of collocations, instructional time is limited (Puimège & Peters, 2020. For this reason, a limited but growing number of studies have examined how exposure to L2 input might lead to incidental collocation learning. Webb and Chang (2020) examined how reading, listening, and reading while listening to a graded reader can help students learn 17 noun-noun and adjective-noun collocations at the level of form recognition. The learning gain in all three treatments was significantly greater than in the no-treatment condition. Yoon and Hirvela (2024) examined students' corpus use behavior and their perceptions of the strengths and weaknesses of corpora as a second language writing tool. Overall, the students perceived the corpus approach as beneficial to the development of L2 writing skills and increased confidence toward L2 writing.

2.2.2. The Role of Corpus-based Instruction

The use of corpus-based materials to teach collocations is becoming increasingly popular. Some notable examples are the works of Basal (2019), Boulton and Cobb (2017), and Fakher Ajabshir (2020). According to Boulton and Cobb (2017), the utilization of corpora in education is an innovative and enhanced strategy that outperforms conventional techniques. As a result, educators are relying less on conventional techniques and embracing modern technological advancements, like integrating corpora in language instruction. To determine how corpus-based instruction affects EFL students' acquisition of incongruent collocations, Rasooyar and Salehi (2016) conducted a study, in which two groups of learners functioned

as the participants of the study. One group experienced learning collocation through corpus-based instruction and the other group received collocation learning through a conventional method of instruction. The results showed that corpus-based instruction had the same effect as the traditional instruction on learning non-congruent collocations. However, students had positive attitudes toward corpus-based instruction and preferred it over traditional teaching. They also reported that corpus-based instruction made them more motivated to learn non-congruent collocations.

The impact of input enhancement and input flooding on learning collocations has been extensively explored in the existing literature (Oveidi et al., 2022). Nevertheless, limited research has been conducted to directly compare the impact of these two teaching methods on the receptive and productive abilities of intermediate learners in terms of collocations, especially within the framework of Corpus-based instructions. Furthermore, the objective of this study is to examine how the use of input enhancement and input flooding in Corpus-based instructions can impact the acquisition of collocations. Considering the issues reviewed above and the main objectives of the study the following research questions were formed.

Q1. Which task type combination (VIE and VIE + EI) in corpus-based instruction is most effective in enhancing participants' collocation learning scores?

Q2. Which task type combination (VIE and VIE + EI) in corpus-based instruction has a more durable effect on the EFL learners' collocation learning scores?

3. Methodology

3.1. Design and Context of the Study

A quasi-experimental approach, utilizing a design that involved pre-test, post-test, and delayed post-test was employed for the data collection phase of the study. The current study was carried out at the medical school in Khuzestan, Iran during the academic year of 2022-2023.

3.2. Participants

The research centered on Iranian EFL upper-intermediate learners and a convenience sampling method was employed to select a cohort of 200 male and female students, aged 20 to 40. This sample underwent the *Oxford Placement Test (OPT)* to assess their vocabulary

and L2 proficiency. A total number of 75 upper-intermediate EFL learners were selected as the participants of the study. The selection was based on their OPT scores, which ranged from 60 to 69. All of them attended a medical college and were enrolled in English courses as mandated by their curriculum obligations. There was a control group consisting of 25 participants, along with two experimental groups. Both experimental groups exhibited similar patterns, yet their teaching conditions were completely distinct. E1: VIE group (n = 25), E2: VIE + Enriched Input group (n = 25). See Table 1 for a full demographic background of the participants.

Table 1

Demographic Background of the Participants

No. of Students	75
Gender	38 Females & 37 Males
Native Language	Persian
Proficiency level	upper-intermediate
College	Medical College

The authors ensured that no ethical considerations were violated in this study. The participants were informed about the study and expressed their consent to participate in the study. The identities of the participants were kept completely confidential. On request, the dataset of the study can be made available via email to the corresponding author.

3.3. Materials and Instruments

In the present study, various instructional and testing materials were employed, including the OPT, treatment materials, and testing instruments. Below, a detailed description of each of these materials is presented.

3.3.1. The Oxford Placement Test (OPT)

The Oxford Placement Test (OPT) is a standardized test (developed by Allen, 2004). The main aim of using the OPT was to evaluate the English language skills of the participants and select learners who were at a similar level. The OPT has two main sections: the listening test and the grammar test, each containing 100 questions. If needed, the test can also be used for diagnostic purposes independently. For this specific study, the grammar test was utilized, consisting of 100 multiple-choice questions. After the test was administered, the scores were obtained using a rating scale specifically designed for the OPT. The scores range from zero

to one hundred, and participants who scored between 60 and 69 were classified as upper-intermediate learners.

3.3.2. Treatment Materials

The second type of materials developed particularly for this study was a collection of collocational combinations. Two university colleagues, PhD holders in TEFL, formed a panel to decide on the selection of the target collocations. They were faculty members at the English Language Center at Jundishapur University of Medical Sciences in Ahvaz. The selected word combinations were taken from *McCarthy and O'Dell's English Collocations in Use (Intermediate)* (2nd edition, 2017*).* Through their extensive 10-year teaching experience, they were able to identify a total number of 50 collocations that are commonly misused by the students. The researcher trusted the experience and expertise of these TEFL experts who were familiar with teaching collocations. Twenty-five collocations were chosen as adjective-noun collocations, such as 'deep aversion' and 'big mistake' while the remaining twenty-five were verb-noun collocations, comprising a verb and a noun or a noun phrase, such as 'have a difficulty, ' 'give an opportunity, ' 'make a decision, ' and so on.

3.3.3. Testing Instruments

The study utilized three comparable tests consisting of fill-in-the-blank items to test the participants' knowledge of collocations. They were created by the researchers and were designed based on the units outlined in McCarthy and O'Dell's (2017) work. Each test included forty items that should have been answered within 40 minutes. A correct answer earned 0.5 points, while incorrect answers received no points and it means that the test scored 20 in total. Each question is a sentence in which some words are missing. Here are two sample items:

1. I recommend anybody to h……. a look at the discussion page.

2. It is normal to g……. some weight during the holiday season.

All three tests had the same format and content. The tests' reliability was evaluated through the test-retest method, which yielded correlation coefficients of 0.84 between the pretest and immediate posttest, 0.86 between the pretest and delayed posttest, and 0.81 between the immediate and delayed posttest. The validity of the tests was confirmed by two individuals who hold PhD degrees in TEFL.

3.4. Data Collection Procedure

3.4.1. Preparation and Orientation

The first two weeks of the experiment included two orientation sessions. Each session lasted two hours. The first session was dedicated to introducing students to the concept of English collocations, their meaning and types. In the second session, the students were trained to use the selected corpus-based online tool via computers. The British Academic Written English, the BAWE corpus, was favored for the following reasons:

- The BAWE is a British Academic corpus of academic works written at universities in the UK.
- The corpus is a record of proficient university-level student writing at the turn of the 21st century.
- It contains just under 3000 good-standard student assignments (6,506,995 words).
- It represents a pattern of British Academic English with fairly evenly distributed disciplinary areas (Arts and Humanities, Social Sciences, Life Sciences, and Physical Sciences) and levels of study (undergraduate and taught master's level).

To facilitate training, step-by-step video tutorials and transcripts were used and made available for review purposes. Students were trained on how to (a) create a free account and password, (b) log in, (c) navigate within the BAWE landscape, (d) identify the five key functions of it: List, Key Word in Context (KWIC) concordances, Collocates, Compare, and Chart, (e) conduct search, (f) access the context and (g) read concordance lines and interpret the output. Afterward, students were engaged in a corpus-based activity focused on using the Collocates function. In addition, a private WhatsApp group was set up with the experimental group and the researcher to exchange students' materials, diaries and corpus results, and to comment on the students' work and provide constructive feedback.

3.4.2. Corpus-Based Method of Instruction

Aston (2000) introduces three main areas in English language teaching for which authentic data can be used. The following three phases were the basic steps taken in designing the workshop sessions:

1. Introduction: Teaching corpora.
2. Exploitation: finding ways to learn collocations with concordancing software.
3. Transformation: learning collocations with corpus concordances.

Table 2

The Corpus-based Collocation Instruction Scheme on a Weekly Basis

Steps	Test	Session	E1 (VIE) Group	E2 (VIE + Enriched Input) Group	Control Group
Test	Proficiency test	Week1	Proficiency test		Proficiency test
	Pretest	Week2	Pretest		Pretest
Treatment	Systematization	Session	E1 Procedure	E2 Procedure	Control Group
	Introduction	Week3	Introducing collocations		Introducing collocations
	Introduction	Week4	Introducing corpus, concordance, word sketch, BAWE		Participants were taught collocations explicitly by the teacher. They were given the meaning of collocations
	Exploitation	Week5	BAWE search words		Students receive examples of collocations
	Exploitation	Week6	BAWE- target head words and their collocates		analyzing example sentences and underlining the nouns and their adjective collocations
	Exploitation	Week7	Concordance (examples of use in context)		analyzing example sentences and underlining the verbs and their noun collocations
			the targeted collocations were enhanced	the targeted collocations were enhanced	
	Exploitation	Week8	fill-in-the-blanks activities with the most probable collocation hits from BAWE	The collocations are shown to the students until they identify them and start producing them by themselves.	choosing the correct adjective for nouns in a fill-in-the-blank exercise choosing the correct verb for nouns in a fill-in-the-blank exercise
	Exploitation	Week9	checking the exercises under the guidance of the teacher	students respond to exercises that involve collocations	checking the exercises under the guidance of the teacher
	Transformation	Week10	Discussing the benefits of using corpus concordances for collocation search		discussing the exercises under the guidance of the teacher
Test	Posttest	Week11	Posttest		Posttest
Test	Delayed-Posttest	Week15	Delayed-Posttest		Delayed-Posttest

3.4.3. Treatment

The researcher had a weekly meeting with the participants for 7 weeks (from the 3rd to the 10th weeks of the academic calendar). In each class, there was a 30-minute session

specifically for teaching collocations. Around 7-8, collocations were taught during each session.

3.4.4. VIE Group

In E1, FFI was conducted in the following way: The participants were advised to carefully consider the bolded forms in the reading passages. To assist them, the teacher provided a sample of materials taken from the corpus. These materials consisted of lists containing seven specific collocations. The chosen collocations, as recommended by Norris and Ortega (2000), were highlighted or bolded. The collocations were taught in the following manner:

At first, the lists containing the collocations highlighted in bold for each lesson were handed out to the participants. The teacher clarified the meaning of unknown collocations while the learners searched the collocations. They were required to search for a collocate for the given nodes in concordance lines and simply read the examples on the computer screen without producing a sentence. In each session, learners were only exposed to 7 collocations in concordance so that they were not distracted by a large pool of information. Finally, the students were given exercises that involved completing tasks.

First step: The teacher clarified the meaning of unknown collocations while the learners searched the collocations. A collocation (regular exercise) is shown in Figure 1.

Figure 1

Concordance Lines for 'Regular Exercise' (Taken from the BAWE Corpus)

1. Steven's doctor told him that he needs to start getting **regular exercise**. He's overweight and has high blood pressure.
2. Steve should be encouraged to continue his **regular exercise** program, as this would also be beneficial and help maintain his quality of life.
3. People who perform **regular exercise** or sports tend to have a higher metabolic rate.
4. We all know that getting **regular exercise** is good for our hearts.

Second step: the students had to do the gap-filling activities. Finally, the teacher checked the answers to the exercises. A collocation (regular exercise) was shown as an example.

Figure 2

Concordance Lines for 'Regular Exercise' (Taken from the BAWE Corpus)

Steven's doctor told him that he needs to start getting **r…. exercise**. He's overweight and has high blood pressure.
2. Steve should be encouraged to continue his **r… exercise** program, as this would also be beneficial and help maintain his quality of life.
3. People who perform **r…. exercise** or sports tend to have a higher metabolic rate.
4. We all know that getting **r…. exercise** is good for our hearts.

3.4.5. VIE + Enriched Input Group

In the E2 condition, which includes both VIE and EI, the FFI procedure was carried out in the following manner: the participants were advised to consider the forms listed in bold in the concordance lines. The teacher displayed a sample of material in concordance. The study materials contained a compilation of seven collocations. The chosen collocations for this research were emphasized or made bold, as recommended by Norris and Ortega (2000).

In the second phase, students must come across collocations on multiple occasions to identify them in authentic situations and start using them on their own. In the second part of the intervention, learners were exposed to texts that were enriched with specific forms.

First step (VIE): During their class activities, the E1 group participants were instructed to focus on the collocations that were emphasized in the concordance.

Figure 3

Concordance Lines for 'Crucial Role' (Taken from the BAWE Corpus)

1. As previously stated, antibodies play a **crucial role** in the immune system, defending the body against toxins that enter the bloodstream and countering disease threats posed by microbes and viruses.
2. For years insects have played a **crucial role** in medical research.
3. The Internet has played a **crucial role** connecting individuals and groups across geographical boundaries.
4. The analysis shows that economic growth plays a highly **crucial role** in the state of health for a nation.

Second step (EI): During this stage, additional examples are presented to the student. The students are repeatedly exposed to collocations until they can recognize them.

Figure 4

Concordance Lines for 'Crucial Role' (Taken from the BAWE Corpus)

And Steve played a crucial role in helping me become ready to make that decision.
That said, high school math competitions played a crucial role in my development, and without them it is quite possible that I would.
There were no sessions that addressed the crucial role of the father in a girl's life.
Luck plays a crucial role, no matter how you decide to publish.
For example, protein and vitamin C play a crucial role in carrying iron across the intestinal lining.
Mitt Romney and many believe the Latino vote played a crucial role in his re-election.
I will be playing a crucial role in helping others to avoid experiencing what I have this year.
Senior leadership must keep in mind the crucial role middle management plays in managing change,
Do you think Sandra is so responsible for the beats? I think her initial, crucial role was to have the place and gear for them to record with, and.
The International Development Secretary must be congratulated for acknowledging the crucial role of women in society.

Third step (VIE + Enriched Input group): At this phase, students engage in responding to exercises that encompass collocations. Ultimately, the instructor verifies the solutions to the exercises.

3.4.6. Control Group

The control group performed the tasks without access to the concordance lines. The individuals in this group were solely instructed on collocations from the textbook. In each session, the participants received a handout with seven collocations and example sentences. Before doing the exercises, they were given specific collocations for the week, which were shown on the handouts along with example sentences that demonstrated how these combinations were used. The teacher guided in analyzing each sentence on the handout.

The steps for teaching collocations to the group were as follows: The section was split into two parts: (a) The teacher taught collocations explicitly and explained their meanings; (b) Students were given examples of collocations (see Figure 5). Next, Students completed four exercises to learn adjective-noun and verb-noun collocations (see Figure 6). The exercises included: (a) Analyzing example sentences and underlining the nouns and their adjective collocations; (b) Analyzing example sentences and underlining the verbs and their noun collocations; (c) Picking the right adjective to fill in the blank space in a sentence; (d) Choosing the appropriate verb to complete the missing words; 3) Extensive review and

discussion were conducted on the exercises by the teacher (see Figure 7). The control group completed the exercises as presented in the textbook within one hour. After seven sessions, the researchers carried out a posttest to evaluate the participants' understanding of the collocations.

The First Step:

a) The teacher explicitly taught participants collocations. While going through the collocations, the teacher explained the meaning of unfamiliar ones using L1 translation. For example, 'have a break: استراحت کردن', 'foreign policy: سیاست خارجی', and 'rich culture: فرهنگ غنی'.

b) The students were provided with collocation examples. They examined how collocations were used in the sentence.

Figure 5

Collocations Examples Like 'Have a Break, Foreign Policy, Rich Culture' (Taken from 'Collocations in Use' Textbook)

1	Have a break	Let's have a break when you finish this exercise.
2	foreign policy	It was a success for his foreign policy and, no less significant, a breakthrough in domestic politics.
8	Rich culture	Mexico is an enormous country with rich cultures and traditions.

The Second Step:

Part a & part b) The process involves examining sample sentences and highlighting the nouns along with their associated adjective combinations, as well as examining sample sentences and highlighting the verbs along with their corresponding noun combinations.

Figure 6

Collocations Examples Like 'Have a Break, Foreign Policy, Rich Culture' (Taken from "Collocations in Use" Textbook)

1	Have a break	Let's <u>have</u> a <u>break</u> when you finish this exercise.
2	Foreign policy	It was a success for his <u>foreign</u> <u>policy</u> and, no less significant, a breakthrough in domestic politics.
3	Rich culture	Mexico is an enormous country with <u>rich</u> <u>cultures</u> and traditions.

Part c & part d) Participants were given the task of selecting the appropriate collocation for every sentence. Example: Choose the correct collocation

Figure 7

Collocations Examples Like 'Have a Break, Foreign Policy, Rich Culture' (Taken from "Collocations in Use" Textbook)

1. We -------- a break now and get to prepare for a tough January. Have/contain
2. President Clinton said in his ----------policy speech two weeks ago. Foreign/strange
3. Iran is an enormous country with ------cultures and traditions. Rich/wealthy

The Third Step:

Finally, the teacher checked the exercises and elaborated on certain issues if necessary.

3.5. Data Analysis Procedure

Several statistical procedures were conducted in this phase of the study. After homogenizing the research groups through the results of the OPT, and checking for normality distribution of the data mixed ANOVA, one-way ANOVA, and some post hoc Tukey tests were used to answer the research questions. The details of the statistical analysis are presented below.

4. Results

4.1. Normality Tests

Tests of normality were carried out through the Shapiro-Wilk procedure. This was done to determine the homogeneity of the learners in terms of their collocational knowledge before administering the treatment. To assess the assumption of mixed ANOVA, the researcher checked the normality condition of the data set before making a decision about which statistical method to use. The results of the normality tests are shown in Table 3.

Table 3
Results of Test of Normality (Shapiro-Wilk)

Student		Shapiro-Wilk		
		Statistic	df	Sig.
Pretest	E1	.950	25	.257
	E2	.943	25	.176
	C	.953	25	.291
Posttest	E1	.944	25	.187
	E2	.942	25	.168
	C	.966	25	.553
Delayed Posttest	E1	.937	25	.124
	E2	.955	25	.327
	C	.961	25	.429

According to Table 1, the data were normal, and parametric statistical procedures were utilized.

4.2. Results of Research Questions

Table 4
Descriptive Statistics for Collocation Scores in Pre-Test, Immediate Post-Test, and Delayed Post-Test

	student	Mean	Std. Deviation	N
pre	Control	10.32	5.023	25
	E1	9.92	4.966	25
	E2	7.96	4.860	25
	Total	9.40	4.992	75
post	Control	14.76	2.818	25
	E1	18.24	1.690	25
	E2	17.04	1.485	25
	Total	16.68	2.516	75
delay	Control	14.20	2.327	25
	E1	18.08	1.706	25
	E2	16.88	1.364	25
	Total	16.39	2.443	75

Table 4 presents the mean scores of the participants on the pretest. The mean scores for E1, E2, and the control group turned out to be 9.92, 7.96, and 10.32, respectively. Moreover, this depicts the mean scores of the participants on the immediate posttests. The observed mean scores were 18.24, 17.04, and 14.76 with the total mean score of 16.68. The immediate posttest revealed that the E1 group achieved the highest mean score, whereas the E2 group obtained the lowest mean score. The mean scores of the participants on the delayed posttest are also displayed. The scores of the control and treatment groups turned out to be 14.20, 18.08, and 16.88, with a total mean score of 16.39.

In order to address the first research question, a mixed ANOVA was employed, considering two primary factors: time (receptive pretest, immediate posttest, and delayed posttest) and group (control, E1, E2). The purpose of this analysis was to determine if there were any significant interaction effects among the groups. Furthermore, a one-way ANOVA was conducted to compare the overall scores of the three groups on the pretest, immediate posttest, and delayed posttest, followed by post hoc Tukey tests. The statistical significance was established at a confidence level of 0.05. The findings of the mixed ANOVA for the collocation tests are presented in Table 5.

Table 5

Results of a Mixed-ANOVA on the Collocation Tests with Time and Group Factors

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Time	Sphericity Assumed	2547.449	2	1273.724	158.201	.000	.687
	Greenhouse-Geisser	2547.449	1.038	2454.996	158.201	.000	.687
	Huynh-Feldt	2547.449	1.069	2384.099	158.201	.000	.687
	Lower-bound	2547.449	1.000	2547.449	158.201	.000	.687
Time * student	Sphericity Assumed	227.164	4	56.791	7.054	.000	.164
	Greenhouse-Geisser	227.164	2.075	109.460	7.054	.001	.164
	Huynh-Feldt	227.164	2.137	106.299	7.054	.001	.164
	Lower-bound	227.164	2.000	113.582	7.054	.002	.164
Error (Time)	Sphericity Assumed	1159.387	144	8.051			
	Greenhouse-Geisser	1159.387	74.711	15.518			
	Huynh-Feldt	1159.387	76.933	15.070			
	Lower-bound	1159.387	72.000	16.103			
Group	Intercept	45085.444	1	45085.444	2795.001	.000	.975
	Group	206.142	2	103.071	6.390	.003	.151
	Error	1161.413	72	16.131			

The results showed significant main effects of time (F = 158.201, p = 0.000, partial $\eta 2$ = 0.687). Furthermore, a significant main effect was observed for both time and group. (F= 7.054, p = .001, partial $\eta 2$ = .164). Groups also had a significant interaction (F = 6.390, p = 0.003, partial $\eta 2$ = 0.151). The partial eta-squared also shows large effect sizes. To analyze the significant main effect of the group, a one-way ANOVA was conducted for each test. The results of the one-way ANOVAs for the collocation tests are presented in Table 6.

Table 6

Results of One-Way ANOVAs on Collocation Posttests and Delayed Posttests

		Sum of Squares	df	Mean Square	F	Sig.
pre	Between Groups	79.760	2	39.880	1.628	.204
	Within Groups	1764.240	72	24.503		
	Total	1844.000	74			
post	Between Groups	156.240	2	78.120	18.023	.000
	Within Groups	312.080	72	4.334		
	Total	468.320	74			
delay	Between Groups	197.307	2	98.653	29.054	.000
	Within Groups	244.480	72	3.396		
	Total	441.787	74			

The pretest did not reveal any significant main effect of Group (F= 1.628, p = .204). However, a significant main effect of the Group was found in the immediate posttest (F =

18.023, p = 0.000) and delayed posttest (F = 29.054, p = 0.000). Table 7 shows the results of the Tukey post hoc analyses of the collocation posttests.

Table 7
Results of Post hoc Tests on Collocation Posttests and Delayed Posttests

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Post	E1	E2	1.200	.594	.263	-.45	2.85
		C	3.480*	.594	.000	1.83	5.13
	E2	E1	-1.200	.594	.263	-2.85	.45
		C	2.280*	.594	.002	.63	3.93
	C	E1	-3.480*	.594	.000	-5.13	-1.83
		E2	-2.280*	.594	.002	-3.93	-.63
Delay	E1	E2	1.200	.556	.203	-.34	2.74
		C	3.880*	.556	.000	2.34	5.42
	E2	E1	-1.200	.556	.203	-2.74	.34
		C	2.680*	.556	.000	1.14	4.22
	C	E1	-3.880*	.556	.000	-5.42	-2.34
		E2	-2.680*	.556	.000	-4.22	-1.14

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

The Tukey post hoc analysis demonstrated that all three treatment groups exhibited superior performance compared to the control group. There were significant differences in the mean scores between the experimental groups (E1, E2) and the control group (p > 0.05, p = .000). The VIE procedure proved to be the most effective task type for the experimental group (E1) in contrast to the other experimental group (E2). Furthermore, Table 6 shows that both treatment groups had a decrease in mean scores from the immediate to the delayed posttest, with E1 and E2 having equal values.

5. Discussion

The objective of this research was to explore the influence of different input tasks, such as VIE and IF, on the process of learning collocations through corpus-based instruction. To assess the results, the study posed two research questions. The first question examines the potential consequences that may arise from utilizing mixed methods, specifically VIE and VIE + EI. The group assigned to the VIE condition demonstrated superior performance compared to other groups in terms of the differential effects of mixed procedures during the immediate posttest. The second most effective method was VIE + EI. The post-test results showed that both experimental groups made improvements in their scores. Nevertheless, the control group did not show such an improvement. This section discussed the outcomes while taking into account these two circumstances. The findings of Naseri and Khodabandeh

(2019) and Marashi and Rezaei (2023) support the idea that improving typographic and visual input enhances students' collocational competence in EFL.

The findings from the second question indicated that every experimental group successfully maintained their understanding of collocations. Two mixed instructional methods employed had a lasting impact on the participants' acquisition of collocations. Of course, the influence of instructional packages on learning forms slightly diminished between the initial and subsequent posttests, but this decline was not statistically significant. In addition, it was found that both E1 and E2 had an equal effect. These results are aligned with the study conducted by Fang and Jiang (2020), which emphasized the significant impact of TE, an input-focused approach, on the learning of L2 collocations.

The students in the experimental group experienced an improvement in their EFL collocational competence through the utilization of input enhancement and online corpora. This improvement allowed them to easily comprehend and utilize collocations, resulting in their words fitting together seamlessly and sounding natural. This finding aligns with the research conducted by Naseri and Khodabandeh (2019), which demonstrated that visual input enhancement aids students in developing their EFL collocational competence. However, the research conducted by Rasooyar and Salehi (2016) contradicts this finding, as their study revealed that corpus-based instruction had a similar impact on EFL students' learning of non-congruent collocations as traditional instruction. Despite this contradiction, students displayed a positive attitude towards corpus-based instruction.

The results accord with the concept that utilizing a larger number of input tokens, known as input flood, can effectively capture learners' focus on the desired linguistic forms (Reinders & Ellis, 2009). Some studies have consistently shown that being exposed to multiple texts yields better learning outcomes compared to exposure to a single text (Webb & Chang, 2022). The increase in textual input may have further emphasized the importance of target collocations within the texts, thereby attracting learners' attention to these specific word combinations (Puimège & Peters, 2020). Therefore, teachers can integrate both input enhancement and input flood methods to assist learners in acquiring and recalling the target structures. In essence, employing these two techniques together enhances the conversion of input to intake, leading to improved noticing. This is supported by the results of the long-term retention test in the study, where participants taught with both input enhancement and input flood techniques outperformed the other groups.

6. Conclusion

This study aimed to investigate how the use of concordancing techniques in input-based instruction can improve the understanding of collocations for Iranian EFL learners. Prior investigations on collocations suggest that in order to attain successful learning outcomes, courses should be carefully planned according to pedagogical objectives and theoretical frameworks. It was evident to the researchers that the participants possessed limited familiarity with concordance tools, which they attributed to their prior experiences with the English language and the education they received in the early stages. This highlights the crucial need to incorporate well-structured corpus-based instruction into the classroom and introduce collocated words in a systematic manner. By utilizing concordancing tools, the misconception that learning and teaching collocations are challenging can be dispelled.

However, there is evidence suggesting that extended exposure to English could help with learning collocations, just like any other aspect of the English language. However, in a second language acquisition setting, it would be beneficial to supplement this exposure by explicitly learning collocations. Teaching collocations in bulk in a structured manner may not be practical. Therefore, teaching should primarily focus on vocabulary material that includes commonly used words in the language (Nation 2001). The researchers encountered numerous inquiries while carrying out this study. Specifically, the study revealed that certain Form-Focused Instruction techniques were unable to account for the comprehensive understanding of collocations among EFL learners. It was obvious to the researchers that the participants had limited knowledge of concordance tools. They believe that it is the result of their previous experiences with the English language and the education received in the early stages. This suggests that the remarkable necessity is to include strong structured corpus-based instruction in the classroom and the introduction of collocated words in proper order. Using concordancing tools could break the predisposition to think that learning and teaching collocations are difficult.

Any research in the humanities and social sciences, no matter how carefully conducted, is subject to some limitations that allow us to carefully generalize the results of the study. The fact that the subjects of the present study were not randomly selected is perhaps an obvious limitation. The subjects were limited to the students at Jundishapur University of Medical Sciences in Ahvaz. Therefore, while the study revealed interesting findings about the relationship between the Iranian EFL university learners' use of lexical collocations and

their online writing fluency, the findings may not be easily generalized beyond the subjects of the study. Consequently, future researchers should delve into the realm of form-focused instruction and explore alternative techniques that could potentially have significant implications for the learning and teaching of collocations. The impact of corpus-based instruction, VIE Visual Enhancement, and FI Input Flooding on grammar could be explored in future research. Furthermore, this study can help authors and teachers take teaching corpus-based collocations into serious consideration.

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