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Elaborative text modification vs. input flooding: a case study on non-congruent collocations

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Abstract

The purpose of the present study was to compare the effects of input flooding and input elaboration on the learning of non-congruent collocations by Iranian English as a foreign language (EFL) learners. The participants of the study included 60 EFL learners at the intermediate level of language proficiency who were divided into two equal groups. They received the instruction of non-congruent collocations based on input elaboration and input flooding methods and their knowledge of non-congruent collocations was measured before and after the instruction. The results of paired samples t-tests run on the pretest and posttest scores of each group showed that input flooding and input elaboration had both significantly affected the learning of non-congruent collocations by the participants. However, the results of ANCOVA run on the pretest and posttest scores of non-congruent collocations test indicated that there was no significant difference between the two groups receiving input elaboration and input flooding in terms of their knowledge of non-congruent collocations after the treatment. This led to the conclusion that input flooding and input elaborations are two effective methods for teaching non-congruent collocations to Iranian EFL learners.

Keywords: Input, Input modification, Input flooding, Text modification, Elaborative text modification

Introduction

A close look at the studies conducted on collocations (e.g., Källkvist 1995; Granger 1998; Lorenz 1999; Nesselhauf 2003, 2005) shows that second language (L2) learners, even at the advanced level, face many challenges when it comes to comprehending and learning these formulaic expressions. It is claimed that highly used words are innately cumbersome since their semantic capacity is wide and their collectability is limited. Moreover, the research on L2 acquisition of collocations has indicated that L2 learners' first language makes a considerable contribution to how they progress in their L2 collocation learning (e.g. Biskup 1992; Boonyasaquan 2006; Fan 2009; Koya 2003). In fact, overdependence on the first language may be an indication of learners' assumption regarding the one-to-one agreement between collocational choices in the first language and second language.

The empirical studies conducted by authors such as Mongkolchai (2008), Laufer and Waldman (2011) and Yumane (2012) reveal that where the collocation in L1 matches

that in L2, namely, congruent collocations, positive transfer is most likely to occur. On the other hand, in the case of disagreement between linguistic units (non-congruent collocations), there is a high likelihood of negative transfer. This makes L2 learners create erroneous L2 combinations (Ellis 2008; Gass and Selinker 2008). Providing the L2 learners with adequate appropriate inputs serves as a way to help them to learn collocations more effectively.

During the past decades, the contribution of input to second language acquisition has been the focus of attention. For example, Krashen (1982) notes that effective language acquisition and learning require being exposed to comprehensible input. Krashen (1985) asserts that as its major purpose, SLA should provide L2 learners with comprehensible input. In the same vein, Chaudron (1985) argues that the process of language acquisition does not occur as long as language input is not comprehensible to the learners. Consequently, an effort has been made to make the inputs comprehensible, with the use of input modifications such as input elaboration and input flooding being considered as the main methods.

Based on the studies already carried out on input modification, the impact of input flooding, as well as input elaboration on different language skills and components, have been probed separately. For example, a strand of studies has investigated the effect of different types of text modifications on L2 comprehension (e.g., Brewer 2008; Maxwell 2011; Oh 2001). Some other studies (e.g., Kim 1996; Urano 2000) have examined the effect of input flooding along with input elaboration on second language comprehension and vocabulary acquisition. Yet, no study has so far sought to investigate the comparative effect of input elaboration and input flooding on L2 learners' acquisition of non-congruent collocation.

Literature review

Collocations and non-congruent collocations

Richards and Schmidt (2010) define collocation as the constructions that are concerned with the constraints on how we can use the words together. (For example, which verbs can be conjoined with what prepositions, or which nouns are used with verbs). Granger (1998) characterizes collocations as those words that co-occur in a natural text, following particular syntactic patterns (such as verb + noun, adjective + noun). Studies on the acquisition of these linguistic creations offer promising outcomes as collocations constitute an essential component of formulaic constructions. Moreover, knowledge of collocation is considered as a requirement for successful L2 learning and communication (Bahns and Eldaw 1993).

According to Nakata (2006), the group of collocations which we can translate literally into the second language while keeping their meaning and sound natural in that language is named congruent collocations. In contrast, as Nakata (2006) maintains, non-congruent collocations are described as those collocations whose exact equivalent in the second language cannot be found so that its literal translation in the second language would yield an odd expression. Obviously, collocations constitute an essential section of vocabulary knowledge in multiple models of mental lexicon (Nation 2001). Although knowledge of collocations is gaining increasing momentum as an inevitable element of second language acquisition, investigations carried out on collocations

reveal that L2 learners face inherent challenges and problems while seeking to learn the collocations of another language (Howarth 1998).

Multiple studies have focused on L2 learners' knowledge of collocations (Marton 1977; Shei and Pain 2000; Matsuno and Sugiura 2002; Koya 2005). Most of these investigations came to the conclusion that L2 learners are grappling with inadequate knowledge of collocation. These formulaic languages create many challenges, especially, in EFL context. For example, in an investigation conducted by Marton (1977) on Polish learners' collocational knowledge along with their capability to apply these collocations, multiple translation tests were taken by the participants as pre-test and post-test. In addition, the researcher made use of two comprehension tests consisting of the same collocations covered in the translation tests. The findings showed no significant difference between the L2 learners' performance regarding the translation tests. This bears a testament to their low productive knowledge of collocations. It was concluded that only being exposed to the small sample of collocation cannot improve learners' required knowledge of how to produce collocation.

The study conducted by Shei and Pain (2000) yielded similar results. Their investigation focused on how the advanced Chinese-speaking learners' knowledge of English collocations was. To this end, they administered a questionnaire. The results indicated that the participants suffered from poor knowledge of the collocations. As a result, the practitioners devised an online correcting program with the aim of collocational errors identification. They offered a type of reference for the learners which was a representative of a larger corpus of collocations.

Moreover, in their study, Matsuno and Sugiura (2002) demonstrated the participants' inadequate knowledge of collocation. This investigation sought to shed light on whether the collocational expressions uttered by L1 Japanese people learning English are similar to those uttered by native speakers. To do the study, the researchers used the following two corpora: Japanese learners' corpora and native speakers. The Japanese corpus included a collection of the essays composed by college freshmen, who were requested to write about a particular topic as fast as possible. They were allowed to consult a dictionary. The findings showed that Japanese learners of English had inadequate knowledge of collocation. Recently, some investigations have focused on the role of L1 in EFL learners' acquisition of English collocations. The results indicated that L2 learners benefit from their mother tongue in the face of inadequate English word knowledge (Koprowski 2005). The results of some other studies including Nesselhauf (2003) have revealed that there is a difference between learning congruent and non-congruent items. However, there is inadequate evidence upholding this conclusion.

Input simplification and elaboration

It is possible to categorize the ways we change input and interaction into the following two main groups: 1-simplification and 2-elaboration. Simplification is concerned with the elimination of intricate words and difficult syntactic structures from a text initially originally intended for native speakers. Being presented in a simplified content, these outcomes become less demanding to understand and more intelligible with respect to vocabulary and language structure. Although, an important method concerning the simplification of L2 input is to upgrade its intelligibility, the sole linguistic

simplification of L2 input does not guarantee an increase in the improvement of L2 understanding (Issidorides 1988; Issidorides and Hulstijn 1992).

There is a difference between elaboration and simplification in that the former eliminates those vocabulary items and complex syntactic structures which are troublesome. Elaboration is aimed at expanding content understandability through providing meanings of troublesome words. Moreover, it involves rewording those sentences which contain intricate syntactic structures, advancing semantic aspect. Many educators focus on input modification through elaboration because of the following:

- Elaborated inputs incorporate all the material needed for L2 learners' acquisition of the second language.
- Elaborated inputs provide non-native speakers with common native speaker talk models.
- Elaborated inputs are as effective as simplified input to promote a higher level of comprehension compared to intact text (Issidorides and Hulstijn 1992). Simplified text and simplified register (e.g., foreigner talk) have many elements in common. Yet, elaborated text solidifies components of interactionally modified input, coming from a modified input of native speaker or capable non-native speakers by creating interactional modification like chatting with non-native speaker face-to-face.

The studies conducted on written text modification drew inspiration from Interaction Hypothesis developed by Long (1983a, 1983b, 1996). According to this hypothesis, the adequate evidence of the input modification along with comprehensible input as well as acquisition relationship enables the linguistic context to serve as an indirect causal variable in second language acquisition. These investigations have sought to construe a connection, in two stages. That is, between modified text (through simplification /elaboration, or enhanced L2 reading comprehension (step 1), and between comprehensible text, as a post-modification, and second language acquisition (of lexis, as a regularly usual measure of acquisition) in step 2.

The majority of these investigations (Parker and Chaudron 1987; Tsang 1987; Yano et al. 1994) have embarked on investigating only the first step of the relationship. Based on the results of these studies, when a comparison is made between simplified /elaborated texts and unmodified content in the context of L2 reading comprehension, the simplified text is usually found to be more intelligible compared to unmodified content. Moreover, no considerably critical difference was observed between the comprehensibility of simplified and elaborated text.

Inadequate studies (e.g. Chung 1995; Kim 1996; Silva 2000) have examined the question whether elaborated text results in second language acquisition through promoting second language comprehension. Yet, in these investigations (e.g. Chung 1995 there is a concentration mainly on vocabulary. The findings of these studies revealed no significant difference when it comes to the impact of reading elaborated and unmodified content on L2 vocabulary acquisition, and between reading elaborated and simplified texts. Overall, as Chung maintains, elaboration is relatively as facilitative of second language understanding as the simplification.

Likewise, in an investigation, Loewen and Inceoglu (2016) studied the impact of textual manipulation on students' perception of targeted forms as well as their knowledge

of the forms concerning the Spanish preterite and imperfect verb forms. The statistical results indicated that there was no difference between the two groups regarding the extent of attention they paid to the targeted forms. However, both groups could enhance their knowledge of the second language forms. Furthermore, Farahany (2015) conducted a study to examine the possible effect of visual input enhancement as well as global/analytic learning styles on L2 learner's acquisition of the English article system in Iran. The study used a factorial pretest-posttest control group design. The sample was made up of 40 students who were chosen from a primary larger sample of 55 sophomore and junior students. The participants were studying English Literature and Translation at Arak University. Using the statistical method of ANOVAs, the investigation showed no significant impact for visual input enhancement and learning styles on the learning of the English article system.

Elaborative text modification

Elaborated texts are mainly intended to make implicit information clear and explicit, making connections to the surface (Ragan 2006). Consequently, as discussed by Ragan, words are usually augmented to improve comprehension. The aim is to yield a more coherent text as well as to reduce the ambiguity within it. Moreover, Ragan maintains that as for the elaborative text compared to linguistic simplification, modification promoted text coherence. Understandability does not mean that the text is less difficult to understand as measured by readability formulas. These studies by large have focused on the impact of simplified vocabulary as well as syntax of spoken language and written text.

Investigations carried out on the impact of simplification compared to elaboration on aural input comprehension and retention has indicated that elaboration devices make the contribution to the improved comprehension more than linguistically simplified input (Chaudron 1983). These results have corroborated the results of many studies, including Yano et al. (1994) and Oh (2001). The majority of written materials are generated for native English-speakers in mind. As a result, ELLs may find these texts semantically and syntactically complex (Khang 2008). According to Brewer (2008), given that written input should not be negotiated on the spot like oral input can, it is necessary that the negotiation of meaning of the material occur before by modification.

Input flooding

The significance of the role input plays in language acquisition is obvious. In fact, the input is considered as the language that an individual hears or sees while processing its message. For instance, when an individual watches a movie or listens to the news, they are being exposed to the input. Various authors have put emphasis on the pivotal role of input in language acquisition. For example, as one of the supporters of Universal Grammar (UG), Ellis (1990) asserts that input (known as positive evidence) is a necessity to instigate UG mechanisms so that children can acquire UG parameters and acquire language accordingly. Furthermore, as for SLA, Anderson (1982, 1983) emphasizes the essential contributions input makes to skill acquisition spanning several cognitive stages.

Despite the fact that some authors' perspectives have put forth different techniques with the aim of exposing learners to input, they all focus on the importance of input in first language and second language acquisition (Nassaji and Fotos 2011). As an important technique, input processing (IP) is used by L2 learners to relate grammatical forms to their meanings or functions. Put it another way, IP is aimed at explaining the way in which learners seek to absorb grammatical forms while focusing on meaning (VanPatten, cited in Nassaji and Fotos 2011). Processing instruction (PI) is one of the sub-groups of PI, asserting that thanks to grasping the way, in which a language learner processes information, instructors are able to expand pedagogical tasks in order to help them easily to make a connection between form and function of language. Yet, as one of the negative impacts of this strategy, L2 learners may initially focus on meaning followed by the form of the language.

VanPatten (1996) believes that usual activities employed in IP instruction are as follows: designing structured input to provide the learners with an opportunity to be exposed to input as much as possible and to focus the students' attention on the intended grammatical structure, words, and then focus their attention on the meaning or the message of the text. It is possible to offer structured activities in two types: referential activities and effective activities. The referential activities are concerned with the kinds of tasks with the dual of correctness and incorrectness. According to Nassaji and Fotos (2011), Affective activities are concerned with those activities entailing learners' agreement or disagreement. Referential activities are aimed at learners' structural patterns of language.

Input flooding and input enhancement are claimed to play a facilitative role in the generation of comprehensible input. This is done through by exposing learners to either highlight or multiple examples of input. In an investigation conducted by Asadi et al. (2014) three groups of intermediate EFL learners were exposed to the following inputs: 1-enhanced forms of input in one group, 2-input with frequent instances of a grammatical structure in specific in another group, and 3- to the third group both types of input. The results showed that these forms play important role in the learners' long-term retention of a structural point of grammar. Yet, the third group had much better compare to two other groups.

Some researchers (e.g., Krashen 1985; Nemati and Motallebzadeh 2013; Sokmen 1997; Trahey and White 1993) deal with the efficacy of input flooding and its contributions to L2 learning. Concentrating on the impact of input flooding on the recall of L2 vocabulary items in the L2 learners' mind, Hedge (2000) asserts that input flooding stabilizes learning stable, making forgetting less likely. Drawing on Krashen's (1985) perspective, rich comprehensible input, as well as input flood, are main requirements for learning an L2.

According to Rikhtegar and Gholami (2015), input flooding practice influenced the Iranian ESL learners' grammar knowledge. Similarly, Balcom and Bouffard (2015) claim that input flood teaching and form-focus teaching had a significant impact on the learning of grammar with respect to adverb placement. The findings indicated that exposing learners to input flooded task along with providing them with opportunities to practice communication leave a great effect on the learning of discourse markers.

The findings of investigations conducted by researchers including Hernández (2008) and Zyzik and Marques Pascal (2012) revealed a positive impact of input flooding on

grammar knowledge. Yet, the results of two other scholars such as Hernández (2011) and Hernández and Rodríguez-González (2012) showed no significant differences in the scores of the two groups one of which was exposed to input flooding and one that was not.

Based on the above literature, so far, there has been so many studies on the effect of Input simplification and elaboration separately on the collection learning. Yet, no study has so far sought to investigate the comparative effect of input elaboration and input flooding on L2 learners' acquisition of non-congruent collocation. Therefore, considering the importance of learning collocations on the improvement of learner's proficiency, the current study aimed at discovering any significance difference between the effects of elaborative text modification and input flooding on the learning of non-congruent collocations. To this aim, the following research question was formulated:

Is there any significant difference between the effects of elaborative text modification and input flooding on the learning of non-congruent collocations?

Method

Participants

The participants of the study included 60 Iranian EFL learners who were selected from an initial pool of 90 language learners based on their availability. The initial pool was selected from a language institute in Babolsar which cooperated with the researcher on the condition of being anonymous. Due to the fact that language proficiency would distort the findings of the study, the 90 language learners took a PET and those students with scores closest to mean score of the sample or were within the range of mean score ± 1 SD were chosen to be legitimate participants of the study. After the screening procedure, 60 EFL learners participated in the study and the remaining 30 participants were discarded.

Instruments

The current study made use of use of two instruments for the purposes of the study. One was a PET based on which students were homogenized in terms of language proficiency and another was a research made collocation test for measuring knowledge of non-congruent collocation.

Pet

Preliminary English Test or PET for short is language proficiency test developed by Cambridge University and functions as placement test putting students on the spectrum of pre-intermediate to intermediate level of language proficiency. The test included four sections covering, all four language skills; reading, listening, writing and speaking. The test took about 120 min to be completed.

Non-congruent collocation test

Using the book series of English Collocation Use, a total of 60 non-congruent collocations for Persian EFL learners were identified. In the next stage, ten experienced English language teachers with at least 5 years of teaching at the intermediate level of language proficiency were asked to comment on the non-congruent nature of collocations. After crossing out 30 collocations based on comments of language teachers, 30

collocations were used as the test. In this test, students needed to provide the Farsi equivalent of the collocations and use them in English sentences. The test was piloted on a sample of 30 intermediate language learners twice with a time interval of 2 weeks in between. The correlation coefficient of the two administrations of the test was used as an index of reliability. Table 1 shows the results of Pearson correlation coefficient.

As the correlation coefficient table shows, the correlation coefficient was found 0.80 with a significant level of 0.00. The coefficient of 0.80 is considered a good index of reliability.

Materials

The teaching material for the purpose of the study was based on the feedback taken from the results of the non-congruent collocation test administered to the participants of the study. In other words, the test items with difficulty level of lower than 0.5 were selected to be taught to the participants of the study. Based on the item difficulty index a total of 30 non-congruent collocations were chosen to be taught to the participants of the study. Accordingly, the related exercises in series of English Collocation Use, the written texts including the test items from the internet and also sentences from oxford dictionary of collocations were used to contextualize the target non-congruent collocations. All the collected materials were used to be taught through input elaboration and input flooding methods.

Procedure

This study adopted a pretest-posttest design and participants of the study were tested for knowledge of non-congruent collocations both before and after the treatment. The study started after the literature review and specifying the scope and purpose of the study with the selection of participants. As stated above, participants in the study were selected from an initial pool of 90 language learners who had been selected based on convenience sampling method. These 90 language learners took the PET and the 60 language learners with scores within the range of mean score \pm 1 SD were selected as homogenized participants in terms of language proficiency. These 60 language learners were divided into two equal groups for receiving input elaboration and input flooding. Before treating the participants with input elaboration and input flooding, students took the non-congruent collocation test and their scores were recorded as pretest or covariate to be later used in the ANCOVA. Moreover, based on test item with difficulty level below 0.5, 30 collocations were chosen to be taught to the participants. One group of students received instruction on target non-congruent collections using materials with the elaborated input method. Drawing on Yano et al. 1994 and Oh (2001) the target collocations were provided with synonyms, antonyms, extra explanations, and rewording the meaning in more simplified language to the students. Another group of

Table 1 Results of Pearson Correlation Coefficient

		Pilot 2
Pilot1	Pearson Correlation	.808 ^a
	Sig. (2-tailed)	.000
	N	30

^aCorrelation is significant at the 0.01 level (2-tailed)

Table 2 Descriptive Statistics of the 90 Language Learners on PET Scores

	N	Minimum	Maximum	Mean	Std. Deviation
PET	90	45.00	73.00	59.9333	6.46998
Valid N (listwise)	60				

students received instruction on non-congruent collocation using the same materials with input flooding method. Drawing on Nemati and Motallebzadeh (2013), students received input flooding through being exposed to many instances of the use of the target collocations. The whole language course lasted for 12 sessions and in each session, approximately three target collocations were taught. After the treatment period, the same non-congruent collocation test was administered to the two groups of the study and the obtained scores were compared between the two groups to find the answer to the research question of the study. In order to compare the effects of input elaboration and input flooding on the non-congruent collocation knowledge of participants, ANCOVA was run on the test scores of the participants after the treatment period. Paired samples t-test was also used to estimate the effectiveness of the two types of treatment on the learning of non-congruent collocations.

Results and discussion

Language proficiency of the participants

The purpose of the study was to compare the effect of input elaboration and input flooding on the learning of non-congruent collocations. In order to be on the safe side and add to the internal validity of the study, the participants of the study needed to be homogenized in terms of language proficiency. Therefore, PET was administered to the participants and those students with scores within the range of $\pm 1SD$ were selected as the homogenized participants in terms of language proficiency. Table 2 shows the descriptive statistics of the 90 language learners initially selected.

Table 1 clearly shows that the initial 90 language learners had the mean score of 59.93 (SD = 6.46). The minimum score was found 45 and the maximum score was found 73. Table 3 shows the descriptive statistics of the 60 language learners on PET scores after students with scores below and beyond mean score $\pm 1SD$ were removed.

After the screening, the initial participants, the mean score of the sample was 60.35 (SD = 3.75) which did not differ much from the mean score of the 90 students. However, the standard deviation was almost half reduced which is an indication of less dispersed scores. Afterward, the participants were divided into two equal groups of 30 and sat for non-congruent collocation test as the pretest.

Effect of input elaboration and input flooding on learning of collocations

Results of initial analysis on language proficiency of the two groups of the study showed that they were statistically equal in terms of language proficiency. Afterwards,

Table 3 Descriptive Statistics of the 60 Language Learners on PET Scores

	N	Minimum	Maximum	Mean	Std. Deviation
PET	60	54.00	67.00	60.3500	3.57404
Valid N (listwise)	60				

Table 4 Descriptive Statistics of the Groups after Instruction on Posttest

	Groups	N	Mean	Std. Deviation	Std. Error Mean
non-congruent pretest	input elaboration	30	10.2000	2.73420	.49919
	input flooding	30	10.3667	2.96512	.54135
non-congruent posttest	input elaboration	30	15.6333	2.61934	.47822
	input flooding	30	15.8000	2.60503	.47561

one group was instructed non-congruent collocation through input elaboration method and another group was instructed through input flooding group. Next students sat for the same collocation test to measure the effect of instructions on the learning of non-congruent collocations. Table 4 shows the descriptive statistics of the groups before and after instruction on knowledge of collocations.

Table 4 clearly shows that input elaboration group had a mean score of 10.20 (SD = 2.73) and input flooding group had a mean score of 10.36 (SD = 2.96) in the pretest. In the posttest, input elaboration group had a mean score of 15.63 (SD = 2.61) and input flooding group had a mean score of 15.80 (SD = 2.60). Results of paired samples t-test showed that both input elaboration and input flooding groups made significant progress in their knowledge of collocation. Table 5 shows the results of paired samples t-test between pretest and posttest of the two groups.

Based on the results of paired samples t-test there was the significant difference between pretest and posttest in input elaboration group ($T = 25.34, P = 0.00$) and also between pretest and posttest in input flooding group ($T = 15.61, P = 0.00$). Since both groups scored higher in posttest, it was concluded that both input elaboration and input flooding were effective in the learning of non-congruent collocations. Apparently, input elaboration and input flooding had similar effects on the learning of the participants as the mean scores of the groups were not widely different from each other both in the posttest. To statistically establish that the two groups are not significantly different ANCOVA was run on the posttest scores. Before, starting the ANCOVA certain qualities of data like the normal distribution, homogeneity of regression slopes and variances and also multicollinearity needed to be checked. The normality of data was checked using Kolmogorov-Smirnov test of normality and homogeneity of variances was checked using Levene’s test for equality of variances. Table 6 shows the results of Kolmogorov-Smirnov test of normality and Levene’s test of equality of variances.

Kolmogorov-Smirnov test of normality indicated that data in both input elaboration and input flooding groups were normally distributed ($P > 0.05$). In addition, Levene’s test of equality of variances showed that the two groups of the study enjoyed similar variances ($F = 1.06, P = 0.30$). Accordingly, the assumptions of normal distribution and homogeneity of variances were met. To check the multicollinearity assumption, it must be shown that there is no strong correlation between the covariates

Table 5 Results of Paired Samples T-test Between Pretest and Posttest of the Two Groups of the Study

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
pretest -posttest	-5.4333	1.66078	.21441	-25.341	59	.000
pretest -posttest	-5.4333	1.90613	.34801	-15.613	29	.000

Table 6 Results of Kolmogorov-Smirnov test of Normality and Levene's test of Equality of Variances

	Kolmogorov-Smirnov			Levene's Test of Equality of Error Variances			
	Statistic	df	Sig.	F	df1	df2	Sig.
input elaboration	.104	30	.200*	1.061	1	58	.307
input flooding	.144	30	.113				

This is the lower bound of the true significance*

(Pallant 2013). As the study had one covariate (pretest), it automatically removed any concerns regarding multicollinearity. Finally, using customizing univariate model and setting the interaction model, the assumption of homogeneity of regression slopes was also examined. Table 7 shows the results of interaction model.

Table 7 illustrates that there is no significant interaction and assumption of homogeneity of regression slopes is met. Statistically speaking, significant level in the row labeled Groups*Non-Congruent Pretest was 0.30 which is greater than the confidence interval of 0.05 and accordingly there was no significant interaction. After establishing the prerequisites of ANCOVA it was run on the posttest scores while entering the pretest scores as the covariate. Table 8 shows the results of ANCOVA.

The results of ANCOVA demonstrated that there was no significant difference between input elaboration and input flooding groups in terms of knowledge of non-congruent collocations ($F = 0.01$, $P = 0.91$). In other words, it was found that input elaboration and input flooding had similar effects on the learning of non-congruent collocations by Iranian EFL learners.

The present study aimed at comparing the effect of input elaboration and input flooding on the learning of non-congruent collocations. Initially, a sample of homogenized students in terms of language proficiency was selected and was grouped into two equal groups. They sat for non-congruent collocation test and their test scores were recorded as the covariate. Then, one group received input flooding and another input elaboration and following that they sat for non-congruent collocation test again. The two groups had similar means scores on non-congruent collocation post-test; that is, input elaboration group had a means the core of 15.63 ($SD = 2.61$) and input flooding group had a mean score of 15.80 ($SD = 2.60$). The statistical analyses of paired samples t-test revealed that both methods of input modification led to the enhancement of

Table 7 Tests of Between-Subjects Effects to Examine the Assumption of Homogeneity of Regression Slopes

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	266.193	3	88.731	38.226	.000	.672
Intercept	263.135	1	263.135	113.359	.000	.669
Groups * Non-Congruent Pretest	2.541	1	2.541	1.095	.300	.019
Groups	2.500	1	2.500	1.077	.304	.019
Non-Congruent Pretest	265.700	1	265.700	114.464	.000	.671
Error	129.990	56	2.321			
Total	15,217.000	60				
Corrected Total	396.183	59				

This is the lower bound of the true significance*

Table 8 Results of ANCOVA on Pretest and Posttest Scores of Elaboration and Input Flooding Groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	263.652 ^a	2	131.826	56.697	.000	.665
Intercept	268.107	1	268.107	115.310	.000	.669
Non-Congruent-Pre	263.236	1	263.236	113.214	.000	.665
Groups	.027	1	.027	.011	.915	.000
Error	132.531	57	2.325			
Total	15,217.000	60				
Corrected Total	396.183	59				

^aR Squared = .665 (Adjusted R Squared = .654)

learning non-congruent collocations. However, the results of ANCOVA indicated that the mean scores on the posttests were not significantly different ($F = 0.01$, $P = 0.91$) leading to the conclusion that input flooding and input elaboration had the same positive effects on the learning of non-congruent collocations by Iranian EFL learners. The results of the present study concerning the effect of input modification are in line with some research dealing with the efficacy of input flooding (e.g., Krashen 1985; Nemati and Motallebzadeh 2013; Sokmen 1997; Trahey and White 1993) and textual modification (e.g., Farahany 2015; Loewen and Inceoglu 2016) and their contributions to L2 learning.

Conclusions

What is concluded from the present study is that input flooding and input elaboration are two effective methods for teaching non-congruent collocations to Iranian EFL learners. This conclusion also gets supported by previous empirical studies with the similar scope of research and also by a theoretical background. The findings of the study point to the significant role of input enrichment in the process of learning vocabulary, in this case, non-congruent collocations. Krashen (1992), one of pioneer scholars in the area of input and famous for proposing the famous Input Hypothesis theory, maintains that input must be comprehensible to language learners and this comprehensibility is in relation to the readiness of the learners in acquiring the input. It seems that some kind of mediation on the part of a teacher to make the learners ready and also some kind of manipulation of the input are necessary to make the learning take place. In the current study, this process was realized through input enrichment by providing elaborated input and input flooding. In input elaboration, various equivalents of the target collocations were provided to the students and in the input flooding, the number of exposures to the target collocations was increased. Both of these methods made the target input salient and increased the students' attention and awareness. The increased attention to the target collocations increases the chance of noticing the target items and also the chance of changing the input into the intake (Schmidt 2010). According to Schmidt (2010), people learn about the things that they attend to and do not learn much about the things they do not attend to. In addition, there several studies pointing to the positive role of exposure in learning vocabulary (e.g., Jenkins et al. 1984; Horst et al. 1998; Rott 1999; Saragi et al. 1978). The study by Moradian and Adel (2011) showed that explicit teaching of vocabulary through lexical elaboration was an effective method for the learning of vocabulary.

The findings also contributed to the role of noticing and attention and emphasize on making the target materials salient to the learners. The findings suggest the use of input enhancement and input flooding for teaching non-congruent collocations on the part of teachers and also encourage material developers to take advantage of incorporating the input enhancement and flooding for the learning of collocations and vocabulary. Although the results were invaluable in terms of teaching collocations to EFL learners, more research is needed on the way input flooding and elaboration affect other areas of language learning such as reading, grammar, etc. In case ELT practitioners are interested in more coherent and integrated methodology future studies should explore the impact of input flooding and elaboration and also input enrichment on other areas of language learning.

Limitations

The present study encountered a number of limitations which put restrictions on the generalizability of the findings. Firstly, it was not manageable for the researcher to select the participants of the study based on pure randomization. Thus, the results should be generalized with caution. Moreover, the participants of the current study were at the intermediate level since the researcher did not have access to the initial pool of participants at other proficiency levels. Thus, the findings of the study may not be applicable to other proficiency levels.

Authors' contributions

The author is the researcher and teacher of the classes in this study. The author read and approved the final manuscript.

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Competing interests

The author declares that he/she has no competing interests.

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