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# The Application of DDL for Teaching Preposition Collocations to Turkish EFL Learners

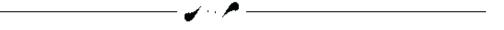
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#### Abstract

It is an old consensus by now that the presentation of corpus findings in the form of concordances in the language classroom may be an important factor for the EFL learners in their efforts to learn collocation of prepositions as part of their language instruction. It is also the case that corpus based materials may help learners to develop their competences in using prepositional collocations in different levels of language proficiency. Finally, evaluating the extent of correspondence between L1 and L2 in preposition collocations is a topic deserving immediate focus by the language researchers. For all the purposes stated above, this present study was done with 60 EFL students in Turkey who were chosen on convenience sampling methodology. After determining the participant students' language proficiencies through "English Unlimited Placement Test by Cambridge University Press" the participant students were randomly divided into two groups. A completion task including various preposition collocation exercises was delivered to students as a pre-test. In one group, the participants were given a traditional instruction on prepositions and their collocations. In the second group, a DDL instruction was done with the EFL students by using corpus concordances. Post-test was done again with the subject student in order to measure the effect of this interference. Paired samples t-test was applied in order to measure the possible effects of DDL in the learning of preposition collocations. The findings indicated that the use of preposition collocations varied depending on the language proficiency levels of the students of prepositions showed to be positively correlated with their levels of proficiency. Another finding was that L1 transfer problems regarding the preposition collocations were observed in the students' productions

**Keywords:** Data-driven Learning, concordance, collocation, prepositions



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#### 1. INTRODUCTION

Having a wide collection of vocabulary and a primary knowledge of grammar do not necessarily mean that one is fluent enough and good at communication in the second language. This is a problematic issue that remains unresolved (Rudzka, Channell, Ostyn, and Putseys, 1985). Most of EFL learners, even at the more advanced levels, have some difficulties in their oral or written productions, though they obviously appear to get access to lexical or grammatical knowledge (Taiwo, 2004; Farghl and Obeidat, 1995; Zarei and Koosha, 2002; Kjellmer, 1987; Bahns and Eldaw 1993). Incorrect productions such as "quick train"; "to take life" and "to be bad with driving" are usually done through the lack of knowledge towards the combinative structure of English language rather than due to lack of lexical or grammatical competence.

When it comes to mastering a foreign language, one of the most problematic areas to learn is the use of prepositions and their collocational patterns. Learning how to use prepositions correctly in a foreign language is a hard task, one that many learners never manage to master completely (Cheng, 1993). Celce-Murcia (2001), states that L2 learners experience several difficulties when learning preposition collocations, these being choosing an inappropriate preposition, skipping a required preposition, and adding an extra preposition unnecessarily.

According to Hill (1999), lack of collocational competence of preposition collocations may be another source of the problem for EFL students. Another reason may be the lack of awareness towards the collocational structure of English lexicon and thus unable to predict the relationship between a proposition and the meaning it adds to the context (Flowerdew, 1999).

Hence, it can be concluded that Turkish EFL students experience problems producing appropriate patterns of collocations (Cheng, 1993; Jin, 1982; Vriend, 1988; Cece- Murcia, 2001; Scott and Tucker, 1974; Zarei and Koosha, 2002 among others).

Knowledge of collocations is said to be an important aspect of achieving native-like competence in foreign language learning; however, it has been largely neglected by researchers and practitioners (Shei and Hellen, 2000). No sufficient attention has been paid to teaching collocations in teaching methodologies. Firth (1957) put forward the idea of collocation for the first time but it didn't receive sufficient attention then. Lewis(1993) drew attention to the significance of collocation and collocation teachingin his Lexical Approach.

According to Lewis (1997), focusing on collocations contributes to language teaching as a more practical way than grammar. He also claims that, as the rules of the grammar are not solely focused on the word patterns and collocations, collocational patterns explain some of the meanings not given in the grammar rules.

Development of digital computers and corpus linguistics enables it to meet new ways of teaching of collocations. Concordancing which is a method of language analysis by examining structures and lexical patterns stored in digital databases is one of them in language teaching.

The concordance program makes it possible to achieve some tasks on the selected corpus. The concordance is able to detect a chosen item and then make a list of the contextual items including that word. This is called the 'KWIC' (Key-Word-In-Context)technique. By KWIC analysis, the lexical and grammatical components collocating with the key word are categorised before and after the key word. It can also spot words or word groups generally accompanying the key word. Thus, students are able to get access to examples of lexical or grammatical patterns derived from authentic language.

The term "data-driven learning" (DDL) was first presented by Tim Johns in 1990 in an effort to describe how language learners may turn to language detectives investigating language data on their own. He believes that the second/foreign language- learners are actually researchers whose learning successfully take place when they have direct access to linguistic data, so he

invented the term 'Data- driven Learning' (DDL) to name his approach. The DDL studies huge databases of language texts (corpora) via software programs called concordancers.

In consideration of the above-mentioned problems and empirical studies reviewed, this studyaims to investigate the role of the DDL in the teaching and learning of preposition collocations to Turkish EFL students learning in English.

# 1.1. Research questions

DLL approach is not a long-established tradition for teaching collocations and several questions and dubious points are waiting for answers and more explanation. Depending on the theoretical background and the findings of the earlier researches conducted in this area, this study is seeking answers to the following research questions:

- 1. How can the data-driven learning help acquire the collocational awareness of prepositions among Turkish EFL students?
- 2. What is the role of Ll inpreposition collocation learning of Turkish EFL learners?
- 3. Is there a correlation between difficulty degree of preposition collocation and various language proficiency levels?

# 1.2. Theoretical Background

It is obvious that some word combinations are considered as single items due to their heavily lexicalized features. Firth (1957) explained this intricate relation between the single word items as "'collocation", which is, according to Benson (1990), similar to the close patterning of two or more words within a short period of each other. Pawley and Syder (1983) noted that these combinations exist at all levels of language proficiency with varying degrees and strengths, these being phrase, clause and sentence levels. Wong-Filmore (1976) stated that developing awareness towards the combinational structure of speech is likely to aid language learning process.

Sinclair (2004) notes that words are co-selected not chosen one at a time. Nattinger and DeCarrio (1992) argues that language learners use unanalysed, prefabricated chunks of language. Hence, second language teaching must similarly be concerned with the establishment of 'lexical phrases'.

The concept of collocation includes the lexical items (lexical collocation) and grammatical items (colligation). Lexical collocation is defined as the lexical co-occurrence of items such as "keep secret" and "strong tea". On the other hand, colligation is the co-occurrence of grammatical items, for example, prepositions+ noun combinations such as "by accident" and "in advance'.

Moehkardi, (2002) and McCarthy (1990) emphasises the significance of collocation in language teaching. They argue that collocation is like a 'marriage contract' between words and it establishes a remarkable organising principle in the lexicon of any language.

Similarly, Brown (1997) thinks one important requirement of mastering vocabulary of a language is to learn collocations since they are likely to the foster-combinative structure of spoken and written language.

Baker (2011) mentions that some collocational combinations may have meanings different from their individual components. For instance, the adjective 'sharp' in the collocational combination 'sharp eyes' is rendered as observant or keen. She further states:

Patterns of collocation are largely arbitrary and independent of meaning. This is so within and across languages. The same degree of mismatch that can be observed when the collocational patterns of synonyms or near-synonyms within the same language are evident in the collocational patterning of equivalents or near equivalents in the two languages (p. 53).

# 1.3. Typology of collocations

According to Nattinger and DeCarrico (1992, p.21) collocations are "strings of words that seem to have certain 'mutual expectancy', or a greater-than-chance likelihood that they will co-occur in any text. Sinclair (1991, p.71) defines collocations as "a tendency for words to occur together and identifiable by the frequency of occurrence". Another specified definition was made by Benson, Benson and Ilson (1997, p.2) who said: "In English, as in other languages there are many fixed, identifiable, non-idiomatic phrases and constructions which are called collocations". They are divided into two groups, these being grammatical and lexical collocations. The first category consists of the main word (a noun, an adjective, and a verb) plus a preposition or 'to+ infinitive' or 'that-clause' and is characterised by eight basic types of collocations listed below:

1.noun + preposition e.g. blockade against, apathy towards

2.noun + to-infinitive e.g. He was a fool to do it., They felt a need to do it.

3.noun + that-clause e.g. We reached an agreement that she would represent us

in court. He took an oath that he would do his duty.

4.preposition + noun e.g. by accident, in agony

5.adjective + preposition e.g. fond of children, hungry for news

6.adjective + to-infinitive e.g. it was necessary to work, it's nice to be here

7.adjective + that-clause e.g. she was afraid that she would fail, it was imperative that I be here.

8. Different verb patterns in English e.g. verb + to-infinitive (they began to speak), verb + bare infinitive (we must work) and other (p.2).

Benson et al. (1997) states that EFL learners tend to find it more difficult to learn grammatical collocations than the lexical ones. This study focuses on adjective + preposition type since it is the most appropriate for the proficiency level of the target group.

# 1.4. Data Driven Learning

The term DDL was first invented by Johns in 1991. Fotovatnia and Talai (2012) defined DDL a student-centred method which helps learners to discover language and maintain learner autonomy. In the DDL, teachers work as facilitators rather than transferring information to the students directly. According to Jafarpour and Koosha, (2005) concordances which are linguistics software that describe lexical and grammar items in their natural contexts and also search very large amounts of linguistic data. Gilquin and Granger (2010) believe there are several advantages of DDL. First, it brings authenticity into the classroom. Second, DDL has an important corrective function. Learners can find the help they need to correct their own interlanguage. The DDL methodology also has the advantage of making learning more motivating and more fun.

In DDL approach language learners are like language detectives who start searching with a question, and then analyse the corpora with a concordance program and finally reach the target. Concordances can be produced in a number of formats. The most common form is the Key-Word-In Context (KWIC) concordance in which collocates are sorted to the right or left of the key word. Figure one illustrates a sample fragment of concordance (KWIC) for the preposition 'to' from the Textbook and Reader Corpora.

Figure 1. A fragment of eighteen concordance lines in KWIC format for the preposition 'in' adopted from the Readers and Textbook Corpora concordanced by AntConc 3.4.4

Concordance I	
7298	sad and alone since then. There's no happiness in this valley, only darkness and death.' When Lor
7299	man came to our gate. He held something up in his hand and shouted at me, 'In the king'
7300	something up in his hand and shouted at me, 'In the king's name, come here!' 24 I walked slowly
7301	?' he asked. 'Yes, sir, it is,' I answered. 'Come in and we'll give you something to eat.' He
7302	I'm a servant at the courts of law in London. In the king's name, take this.' He
7303	a servant at the courts of law in London. In the king's name, take this.' He gave me
7304	ome and travelled with Jeremy Stickles to London. In those days, the journey to London was long and
7305	church at Westminster, but nothing else. I waited in London for two months, until I had spent nearly
7306	ordered me to go there. I entered and stood in front of one of the most powerful men in
7307	in front of one of the most powerful men in England, Judge Jeffreys. The room was not very
7308	three 25 high seats where three men were sitting. In the middle was Judge Jeffreys, a big, strong ma
7309	been paid for the journey and for your costs in the city?' Judge Jeffreys asked. 'No, sir.' He
7310	, John,' he said. 'I have some questions for you. In your part of the country, are there thieves who
7311	's what he should do. He's the judge in that part of the country. Or he could send
7312	ly. They're dangerous, violent men and their home in the hills is very well protected. I think Lord
7313	is name and his profession. Now, one other thing. In your part of the country, are people talking ab
7314	with the presents that I had bought for them in London. That day, everyone on the farm came to
7315	nd climbed up into the valley. Birds were singing in the golden evening. The trees were bright 27 in

# 1.5. Collocation and Transfer

Language transfer can be briefly described as the role one's first language plays in the acquisition of a second language. It is widely accepted that the first language has an effect on the acquisition of the second language and that learners transfer their present knowledge in L1 to complete a similar task in a second language (Ellis, 1986).

To investigate the L1 effect on the acquisition of L2, various studies were carried out. In his study, Ringbom (1978) proved the influence of L1 vocabulary on L2. According to Biskup (1992) and Nesselhauf (2003), L1 turns out to be having a significant impact on the acquisition of L2 collocations.

# 2. METHODOLOGY

#### 2.1. Participants

Sixty English high school students were the participants of this study. They were chosen through convenient sampling from among 360 EFL students studying at Maresal Cakmak Social Sciences High School. Firstly, "English Unlimited Placement Test by Cambridge University Press" was applied to record their levels of English proficiency. Based on the mean scores and the standard deviation of the test, the participants were divided into high level and low-level groups. After determining the participant students' language proficiencies through "English Unlimited Placement Test by Cambridge University Press", the participant students were randomly divided into two groups.

Table 1. Control and Experimental Groups

Group	Level	No	Level	No	Total
Control	high	14	mid	16	30
Experimental	high	15	mid	15	100

#### 2.2. Materials

In this study, the materials used are listed below:

- 1. Firstly, "English Unlimited Placement Test by Cambridge University Press-2010" was delivered to the students in order to check their language proficiency levels.
- 2. Secondly, with the purpose of demonstrating the collocational knowledge level of the

participants, a multiple choice test on collocations of prepositions was administered to the students as the pre-test. This test included 50 items, and its reliability was estimated to be 0.73 using Kr-2l formula. The test was given to60 participants selected through convenient sampling. After the specific practices were given to the participants in each group, this test was administered again as the post-test in order to determine the effect of the training the participants experienced.

- 3. Data on concordance (with a focus on collocation of prepositions) was produced using the concordance software 'AntConc' and the database selected from the Readers Corpus (RC) and Textbook Corpus (TC) including 2,7 million words.
- 4. Teaching materials on the prepositions were picked out from various grammar references such as Spark 2 Grammar book by Dooley et al, (2010); Grammarway(II) by Virginia Evans (2005).
- 5. In order to monitor the potential effects of students' L1 on their development of collocational knowledge, a translation assignment was given to the students.

#### 2.3. Procedures

First of all, the samples of the study were randomly divided into control and experimental groups and they were given "English Unlimited Placement Test by Cambridge University Press-2010" in order to determine their present language proficiency levels. In order to create two levels of proficiency groups, the mean score and the standard deviations of the exam scores were used.

In the next step, they were subjected to a pre-test procedure which was based on a completion test on preposition collocations. The reliability coefficient of this test was measured as 0.73 using the Kr-2l formula. Later, the participants were given English classes on a basis of a class hour each week for a fifteen-week period. The students were taught prepositions and their collocational features based on the classroom course book and corpus concordances. During the sixteen-week treatment, the control group underwent a traditional-based instruction, using only the course book officially assigned. In this traditional method, the students were given explicit training related to the preposition collocations.

However, the experimental group was given a data driven-based instruction related to the preposition collocations. Prepositions and their collocations were presented through concordance lines and also in printouts. The materials used for the traditional instruction were selected from grammar books such as "Spark 2" by Dooley et al., (2010) and "Grammarway II" by Evans (2005). Moreover, the participants in the experimental groups were introduced to the collocation of prepositions through the DDL activities.

Finally, a post-test was administered in order to compare the mean scores of the groups. In order to investigate the degree of importance of the DDL training on the development of collocational knowledge of prepositions among Turkish EFL students, the researchers proposed the first research question.

#### 3. ANALYSIS

Question 1: Does DDL approach play a significant role in the development of knowledge of preposition collocations among Turkish EFL students?

To statistically validate the first research question, the collected data were subjected to statistical analysis (paired samples t-test) via SPSS 16.0. The results of this analysis showed that there was a meaningful difference between the performances of the participants in both groups. Table 1 below displays the results.

Table 2.Paired Samples Statistics and Correlations

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Before_exp_BP	39,7333	60	12,61001	1,62795
	After_exp_BP	49,6633	60	11,76179	1,51844
				N Correlation	Sig.
Pair 1 Before_exp_BP & After_exp_BP				6 ,708	,000

Table 3. Paired samples test results of the first research question

	Paired Differences					
		95% Confidence Interval of the Dif,				
		Lower	Upper	t	df	Sig. (2 tailed)
Pair1 Pre-Post- test	-9,93000 9,34802 1,20682	2 -12,34485	-7,51515	-8,228		

In the longitudinal test applied to 60 subjects, the mean score was estimated to be 39,7333 and the standard deviation12,61001 and average standard error1,62795. This indicates that in the first application the group was heterogeneously dispersed. The difference among the students was 12,6100, which indicates the validity of the test applied. No doubt that when the number of samples was increased the average standard error found would decrease.

Averages of the second data were estimated to be 49,6633, standard deviation 11,76,179 and average standard error 1,51844. It is seen that the homogeneity of the group and validity of the test began to decrease in this application. In the longitudinal test administered, the correlation between the first data and the second data was calculated as 0,708 and there was a significant and positive relationship. The average of the difference between the values obtained for each individual in the longitudinal test was -9,93; standard deviation 9,34802 and the average standard deviation was calculated as 1.20682. The value found is 0,000 and it turned out the difference is statistically significant.

The second research question was about the effect of Turkish EFL learners' Ll on the collocational knowledge of prepositions.

Question 2: Do Turkish EFL learners' Ll have any significant effect on their knowledge of collocation of prepositions?

In order to test this research questions, the samples were given a translation task including thirty gap-filling items on the preposition collocations. The errors and the problematic responses were carefully examined and the necessary conclusions related to the nature of the second research questions were sought. During the analysis, it was seen that the sample students preferred various wrong or problematic combinations of words. Table 3 below present some of the wrong combinations the samples of the study made in the test.

Table 4. Problematic word combinations by EFL learners

	Wrong verbs	Wrong prepositions	
1.	interest in	marry with	
2.	study with	afraid from	
3.	say about	responsible from	
4.		proud with	
<b>5.</b>	•••••	based to	

The preposition collocations problems seen in the samples are likely to be the result of two very common language problems done by EFL learners. First of all, it is obvious that the sample

students transferred the similar prepositions they use with the same adjective in their L1. This is called L1 transfer errors and, in fact, is a very common type of errors among EFL learners. This indicates that first language interference in the production of preposition collocations is a topic which deserves immediate pedagogical focus and attention. The second type of language related problems that cause such problems may be the lack of awareness on the parts of the EFL learners towards the idiomatic structure of English language. The fact that they are solely considering English language based on an "open choice" principle may be, in fact, playing a role in their lack of understanding and interpretation of English lexicon.

# 4. DISCUSSION AND CONCLUSION

In this study, DDL approach and traditional teaching methods were compared in terms of teaching prepositions and their collocational patterns. As the students in the DDL group surpassed those in the conventional group, the study has revealed that the DDL instruction had an advantage over the traditional one. This finding showed that the DDL seemed to be so much useful in the teaching of prepositions. Yet, DDL should not be presented or considered as an alternative to other methods. It may be perceived as a supplementing way of teaching.

The findings of the first research hypothesis of this study are compatible with the results of Pawley, A. and Syder, F. H. (1983) who argued for the need for collocations to be the main focus in vocabulary teaching.

According to Bhela (1999), it is obvious that EFL learners have a natural tendency to use their L1 syntactical structures when they don't know the required structures in L2. This is called L1 transfer. In other words, they transfer collocations belonging to their L1 into the second or foreign languages. The results of the second research question also support the idea that first language interference (negative transfer) may be one of the main causes of learners' errors in L2.

The findings of the third research question are parallel with the belief that competence in using collocations and other multi word combinations efficiently is likely to hint us important information related to the general language proficiency levels of the EFL learners. This view of collocational competence is also supported by Hosseini and Akbarian (2007) who argue that there is much correlation between the learners' general proficiency and their collocational competence.

Other than the findings derived from quantitative data, there are also some observations based on the field notes of the researchers. The DDL group in this study seemed to be more motivated than the conventional one and they found the classes enjoyable. They were eager to use the concordance tools and just seemed to be happy and satisfied with the levels and types of the DDL activities. They were, also, interested in measuring the frequency of the search items as well as enjoyed searching for words and collocations to "discover" the authentic language. According to the field notes the researcher took during the classes, the sample students thought the class was different from usual ones in that they felt more active during and language detectives searching for unknown.

DDL method is not without limitations as well. As Gilquin and Granger (2010) points out logistics is one of the biggest problems of DDL. It's not affordable to provide all the students with computers which are required during the class. Another weak point of DDL is its being time-consuming as searching on corpora and trying to find best examples among concordance lines need a lot of time. Students must be guided most of the time because of the difficulties of using a corpus, especially when they confront a word or collocation that has more than one meaning.

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