Effects of Data-Driven Learning on Collocational Competence of EFL Learners in a Turkish Context[1]

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Abstract

This paper aims at investigating the impact of DDL instruction on the collocational development of Turkish EFL learners. Data collection methods include pre-test and post-test of a nine-week explicit instruction. The samples of the study (n: 31) were selected according to purposive sampling methodology and experimental and control groups were created based on the results of the Cambridge CEFR placement test that was administered at the beginning of the study. The experimental group consisted of 15 Turkish EFL learners and were given training inductively with DDL methods. They were given explicit DDL-based instruction with a focus on the verb and preposition combinations. The control group consisted of 16 Turkish EFL learners and were given training deductively with non-DDL methods. The data collected were analysed through qualitative and quantitative analysis procedures. The preliminary findings indicated that the DDL group scored better than the non-DDL group in gap filling, error identification and correction tasks. There was statistically no difference in single-sentence writing tasks. Based on the findings of the study, it is possible to emphasize the positive contribution of the explicit teaching of collocations through DDL approach with an emphasis on self-discovery of phrasal verbs within a database of 5 million-word-reader corpus that was compiled by the researchers according to a strict design criteria. The EFL learners who received the explicit instruction clearly stated that they were able to develop themselves in collocational competence after they received concordance-based explicit instruction.

Keywords: Data-driven learning, Concordance, Learner Autonomy, EFL

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1. Introduction

Learner autonomy is one of the essential aspects of constructivist theory in terms of language learning. The advent of computers and the integration of computers into language learning environment, particularly at state schools in Turkey, may provide valuable opportunities for both the teacher and the learner in order to establish a sense of exploration and discovery of naturally occurring language. Biber and Reppen (2002) stressed the sharp mismatches between what the grammar books provide and what really happens outside the classroom, putting a remarkable emphasis on integrating corpora into language teaching. Corpus linguistics, or Data-driven learning in particular, may open up new horizons for learners to become autonomous in language learning as it provides the learner with access to naturally occurring language, which may not be possible to acquire once language teaching and learning is confined to classrooms and course books only, with the guidance of teacher who is most possibly not a native speaker of the target language. At this very point, data-driven learning comes to the rescue as it provides opportunities to reach authentic language. Advocates of data-driven learning (DDL) or inductive approaches to the learning of grammar and vocabulary have made use of concordance texts to develop teaching materials which facilitate the learner's discovery of patterns based on evidence from authentic texts and foster a sense of autonomy, as the learner does not depend on the teacher to work out rules of use (Tribble 1990; Tribble and Jones 1990; Johns 1991a, 1991b). This type of approach presents several advantages. The first obvious one is that it brings authenticity into the classroom. Not only do corpora make it possible to expose learners to authentic language, but they can actually present them with a large number of authentic instances of a particular linguistic item and this 'condensed exposure' (Gabrielatos 2005, p. 10) can, among others, contribute to vocabulary expansion of heightened awareness of language patterns (Granger, S. and Gilquin, G. 2010). As pointed out by Nesselhauf (2004), this works well when the learners have difficulty in understanding some points covered in the class over and over again, and keep making mistakes (Granger, S. and Gilquin, G. 2010).

One important question to ask regarding DDL is whether it works and actually facilitates language learning. It must be admitted that, at this stage, very little is known about the effectiveness of DDL, and it is a recurrent theme in the DDL literature that more empirical studies are needed to validate this approach (Granger, S. and Gilquin, G. 2010). Even though there seems to be a body of research regarding the use of data-driven learning and corpus query tools in EFL classrooms, there seems to be space and a need for further study. One must recognize that although there is a great many publications on corpus Linguistics and its classroom applications, there is still need for further studies to see to what extend DDL can foster better language learning (Barbieri and Eckhardt, 2007, p. 320). This particular study was aimed at using corpus query tools, AntConc 3.4.4 (Anthony, L., 2014) in particular, to raise an awareness in students about using computers for self-improvement in terms of language learning, learner autonomy and/or exploratory learning, focusing on English as a foreign language in particular.

In straight line with what is mentioned above, it is obvious that there is an apparent need for further study, preferably emerging from the needs of teachers who are actively teaching; in other words, a new body of research is required especially emerging right from the area carried out by researcher teachers. In order to enhance the quality, effectiveness and fertility of teaching activities, the use of concordancing software and DDL activities is advisable to be promoted by the teacher.

1.1. Constructivism and Language Teaching

As this research attempted to see how learners of English in an EFL classroom could benefit from classroom concordancing, or data-driven learning (DDL) in an effort to become more independent of the teacher as the main source of information, input in the target language and a

guiding figure of classroom activities the literature should be reviewed starting from constructivist learning theory regarding language teaching, one of whose basic notions is learner autonomy (Johns 1991).

The rationale lying behind the notion of learners' exploring the target language independently through their own experiences and at their own pace is relatively recent in the area of language teaching. Students exploring language can find themselves discovering the meaning in context and usage of grammatical items. This may well be summarized as 'Every learner a Sherlock Holmes' (Johns 1997). Hein (1991) explains in his seminal work that constructivism, in principle, means that learners build up their own knowledge with the help of social interaction in groups of various sizes and meaning is constructed for learning to occur. Thus, it can be concluded that the teaching within the classroom should be appealing to each individual's personal needs and ways of learning, in other words learning styles of each student can be different from another's and even the teacher's. The reality that each learner has different combination of attitudes, habits, styles and needs while learning requires that teachers should adapt their teaching accordingly. The role of the teacher in learning to occur relying on a single style of teaching will cut down on the learners` potential to learn. as for the simple reason that classrooms accommodate learners of various features in terms of learning teachers should take action to present as many learners as possible with opportunities to learn that are suitable for their characteristics and needs as learners, though it may not be possible to reach all of them at a single move. Having said these, it has to be mentioned that when the learner puts his effort in learning, that is to say, if the learner is actively taking part in building up the knowledge for his own sake, learning will be facilitated. During learning, the way input is turned into meaningful bits of message depends on a learner's individual mechanisms. Teachers are not the only actors that create learning on behalf of their learners. Learners should actively take responsibility for learning to create by activating their cognitive tools and individual methods that work for themselves. Therefore, it would well be justifiable to say that this approach to learning applies to language learning, which is a process of building up experiences of a target language that will eventually lead to learning in the end, as well. As clearly stated above, learners should be active and the teachers' roles will naturally be different in the constructivist sense. In other words, the learners should be in the centre of teaching activities but not the teacher.

As the teacher is no more the leading figure or the main source of input in the classroom, learners` will be guided to discover what the nature of the target language actually is. But, how is it possible for learners to access the naturally occurring language if they are confined to classroom settings? Here, corpus based activities or data-driven learning (DDL), a term first coined by Johns (1991), in particular classroom concordancing, can be of valuable help for both the teacher as a facilitator and the learner as an explorer of the target language.

1.2. Data-driven Learning and Learner Autonomy

Data-driven learning (DDL) can be defined as the application of using concordance lines with a view to motivate learners to discover a target language (English in this research) and notice how a language works by using their own reasoning, in other words inducing meaning. In recent years, Western ELT scholarship has emphasized student-centred learning, focusing in particular on Computer-Aided Language Learning (CALL) and the use of linguistic corpora, including Data-Driven Learning (Smith, S., 2007). This fairly recent trend has put great emphasis on DDL. It can also correspond to current thinking … in language-learning pedagogy … providing a way 'for students to take more active, reflective and autonomous roles in their learning (Hyland 2002, p. 120). DDL has become a recent trend in language learning. It is a student-centred method, which exhorts rule and pattern discovery and learner autonomy (Talai, T. and Fotovatnia, Z. 2012). Thus, the role of the teacher evolves into a 'research director and collaborator' (Talai, T. and Fotovatnia, Z. 2012) which, in practice, complies perfectly with learner centeredness, one of the basic aspects of constructivist learning theory. As Talia and Fotovatnia (2012) express in the introduction of their joint paper, the active role of the learners

is highlighted in DDL. Though, teaching and learning are generally considered to be complimentary in nature, one can learn without a teacher, too. Through DDL, learners are able to learn independently and autonomously, becoming more aware how the target language works and they become stronger against the cognitive challenges of the naturally occurring language

Although DDL seems to be a yielding means of fostering learner autonomy in language teaching, there is still a controversy as to the appropriateness of exploiting this technique with students of different proficiency levels. For instance, as Johns (1986) exerted, some hold the idea that DDL is suitable for intrinsically motivated adults while others claim that it is not different from task-based learning in which learners achieve tasks during which they are engaged in activities requiring them to discover language patterns and rules (Talai, T. and Fotovatnia, Z. 2012). Although there is a considerable body of research and researchers who carried out investigations of DDL with advanced learners who are mostly adult, Talai, T. and Fotovatnia, Z. (2012) express that the researchers themselves preferred this. Therefore, it can be concluded that so long as the teacher functions as a provider of specially designed corpora taking the proficiency level of the learners into consideration, any drawbacks resulting from the nature of concordance lines to be used in the classroom can be foreseen and thus overcome. The teacher seems to be actively responsible for choosing the best corpora for his students and even preparing a new database. Gilquin and Granger (2010) summarize this as follows:

> Two types of corpora that appear particularly helpful for the process of authentication are the 'pedagogic corpus' (Willis 2003, p. 163) and 'local learner corpus' (Seidlhofer 2002). The former consists of the texts used in the classroom to support teaching (texts from the learners' course books, plus any additional texts that the teacher may have brought into classroom). Although such a corpus may partly consist of concocted texts (in cases where some of the texts used in class were invented), these texts have already been processed for meaning by the learners, and are therefore better contextualised and more directly relevant to them (Granger, forthcoming). Alternatively, a corpus may also be created that comprises transcriptions of the lectures attended by the students, as experimented by Flowerdew (1993) in an English for Specific Purposes course – although building such a pedagogic corpus will naturally be more time – consuming.

In addition to these stated above, Cheng (2010) reports that in Osborne's (2004) study which exploits learner and native-speaker corpora to provide material for language awareness exercises … using the learners' own productions as a starting point for error correction. While some studies recommend the use of small corpora tailored to the learners' needs (Aston 1997; Roe 2000), Johns (1997) recommends mediation by the teacher through the preparation of corpus-based materials as a first stage, or as Widdowson (2003) puts it, the use of a 'pedagogic mediation of corpora'. Teachers' role in language learning is under meticulous inspection as to the use of DDL techniques. O'Keeffe *et al.* (2007) argue that more of the research questions in corpus linguistics need to be language teacher-driven because they arise out of practice and they are the best mediators between corpus findings and practice (p. 246). At this very point, this research may well prove to be of importance as it aims at using DDL tools and techniques within active teaching atmosphere including students as its focus group.

1.3. Literature on Methodology

As to literature on methodology, one specific study stands out. 'A Study of Classroom Concordancing in The Greek Context: Data-Driven Grammar Teaching and Adolescent EFL Learners' (Rapti 2010). This very rare study of classroom concordancing sheds light on a relatively neglected or undiscovered area of corpus applications considering it is a study conducted with adolescents. From this respect, it can be of guiding importance as there seems to be little effort put into research with adolescents and DDL, most significantly in the Turkish context. It can be seen that the data collection methods preferred by Rapti (2010) is of

qualitative value; pair and group work, interviews, one-to-one discussions and questionnaires can be adopted for this study as well.

2. METHODOLOGY

As a response to the need for further research in classroom concordancing in EFL classroom settings, this research is a mixed method research, including both qualitative and quantitative aspects, designed to focus on the following research questions particularly in a Turkish context, this study sought to answer the following questions:

1) To what extent is it possible to motivate high school EFL learners to learn phrasal verbs using corpus tools?

2) How can DDL activities facilitate learning phrasal verbs high school level EFL learners?

2.1. Research Design

The study started, first of all, with an orientation session, which included getting the learners familiar with the rationale behind, the basic understanding and the benefits of corpus linguistics for their own language development.

Secondly, the learners in the experimental group took their time to interact with corpus inquiry tools such as the Sketch Engine (Kilgariff, A., 2003) and AntConc (Laurence, A., 2014).

Thirdly, the learners received practical information about the basic principles of DDL and in the next stage, they were introduced the concept of classroom concordancing. Finally, the learners got much closer to DDL by downloading and learning how to look up words and expressions on AntConc and how to reach an understanding of correlations between words that go together. 8 hrs of class time was spent during the theoretical preparation stage and only the experimental group was included in the theoretical preparation stage.

Table 1. Plan for theoretical orientation of learners

Weekly duration	Systematization	Procedures
Week 1 - 2 hours	Introduction	Definition of corpus
Week 2 - 2 hours	Introduction	The rationale behind corpus linguistics
Week 3 - 2 hours	Introduction	Basics of AntConc
Week 4 - 2 hours	Introduction	The use of AntConc for language learning

2.2. Technical Preparation

For this particular study, we prepared a learner corpus of approximately 5 million words. A total of 115 books are included in our corpus database. The number of the books has no implications and can be extended at will. We used the graded readers ranging from level 1-6 from the two well-known publishers, Oxford University Press and Penguin graded readers, particularly for the reason that they are easy to access in Turkey and the sample is familiar with the language used in these resources emulating naturally occurring language. The books included in the database were selected randomly.

Other than the corpora prepared, learners downloaded and set up AntConc v 3.4.3 on their computers. The corpus database was shared with learners so that they can get used to using it for language learning. Hotkeys pertaining to AntConc inquiries were presented to the learners. The learners were allowed some time for group interaction and individual practice with the software.

2.3. The Samples of the Study

For this particular study, we have a total of 31 learners of English as a foreign language that were chosen on a purposive sampling methodology. The students are 16-18-year-old adolescents. Although we did not apply any methods nor did we use any quantitative instruments to measure their level of motivation, the learners can be said to have a high level of

language learning motivation when compared to the rest of the students in the same school. They are all my students at the school where I teach. Following the application of a recognised CEFR placement test by Cambridge University Press, we divided them into two groups. The control group consisted of 16 learners and the experimental group consisted of 15 learners. According to the result of the placement test 13 pre-intermediate and 3 intermediate learners made up the control group and 11 pre-intermediate, 3 intermediate and 1 advanced learners made up the experimental group. We did not intend to see any gender oriented differences.

Table 2. Demographic information of learner participants (subjects)

		No	**%**
Age	16-18	31	100
Proficiency Level			
	Pre-int.	24	78
	Intermediate	6	19
	Advanced	1	3
Experimental Group		15	49
	Pre-int.	11	74
	Intermediate	3	20
	Advanced	1	6
Control Group		16	51
	Pre-int.	13	82
	Intermediate	3	18
	Advanced	0	0

2.4. Data Collection

In order to create our own pre-test, we used the corpus database that we previously prepared for our study. Focusing on the phrasal verbs within the course book used in the classroom, we made a list of verb-preposition collocates from the curriculum. The course book is compatible with CEFR standards. However, the language used in the course book may not be considered 'naturally occurring' when compared to the corpus database we created for our study. Therefore, it needs to be elaborated on, with the extra effort of both the teacher and the learners themselves. This is where we intend corpus linguistics to come to the rescue.

The list of verb-preposition collocates is as follows:

Table 3. Phrasal verbs within the curriculum for CEFR level B1

UNIT 1	get off	get back	get up	get on well with	get over		
UNIT 2	put through	put away	put up with	put out	put on	put sb up	put off
UNIT 3	run away	run on	run over	run out of	run into		
UNIT 4	come round	come across	come up	come out	come into		
UNIT 5	look forward to	look out	look up	look after	look for		
UNIT 6	break into	break through	break off	break out of	break away	break down	
UNIT 7	give back	give in	give away	give off	give up	give out	
UNIT 8	bring about	bring back	bring out	bring round	bring up		
UNIT 9	turn down	turn on	turn up	turn off	turn to	turn out	
UNIT 10	take on	take out	take up	take after	take off		

2.5. Pre-test

Focusing primarily on the verb-preposition collocates listed above; we searched our corpus database for sample sentences including these phrasal verbs with the meanings highlighted by the author of the course book. The learners were expected to be familiar with the meanings. Both the control group and the experimental group took the test simultaneously.

The pre-test principally consisted of four parts as can be seen in the table below:

Table 4. The pre-test

	Number	Type
PART A	10	gap-filling
PART B	10	error identification and correction
PART C	5	simple sentence construction
PART D	5	determining the meaning

Part-A 10 gap-filling questions in which the learners are expected to fill in the gaps with the true prepositions given.

Part-B 10 error identification and correction questions in which the learners are expected to find any mistakes with the use of prepositions, mark the statement as false and correct them or state that the use of the verb-preposition collocations are true and mark the statement as true.

Part-C 5 simple sentence construction questions in which the learners are expected to write simple sentences using the given phrasal verbs with a correct meaning.

Part-D 5 determining the meaning questions in which the learners are expected to paraphrase the given statements that are derived from the corpus database.

After the evaluation of the pre-test the control group scored 48 points on average while the experimental group scored slightly better with 50 points. The deviation between the average scores of each group did not represent any significant difference.

2.6. Practice Stage 1

After receiving the pre-test results we designed practice stages in which the learners could find the opportunity to interact with the language using their computers and the corpus database that was used as the primary source for the pre-test so that they can better understand the semantic and pragmatic functions of the phrasal verbs under inspection. As for the first practice stage, we decided on an 8-class hour practice and two separate sessions. In the first session, we divided the experimental group into groups of 3-4 learners.

Each group was assigned randomly to work on a set of phrasal verbs previously from the list above. Later, the learners started working with concordance lines. They looked up the phrasal verbs in the corpora and tried to derive the meanings.

Visual 1. Learners preparing Power Point slide shows
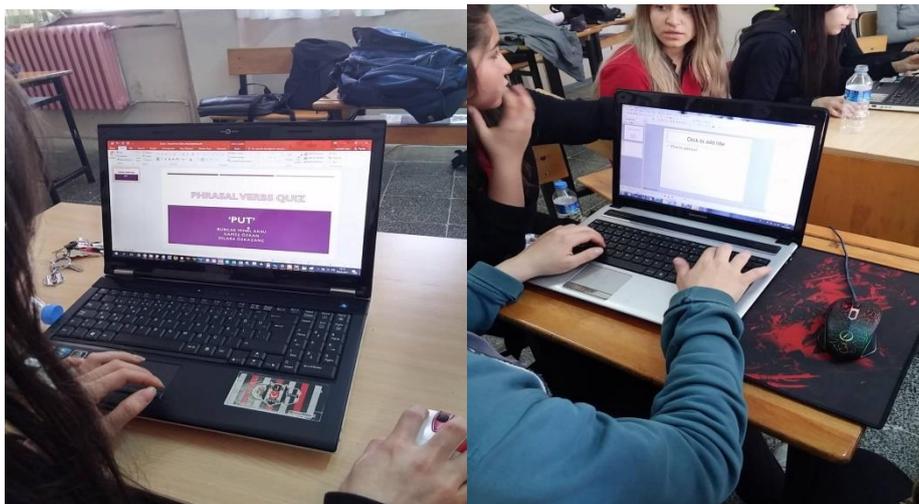
After seeing multiple examples for each phrasal verbs they copied 3 example sentences for each and prepared a power point slide quiz consisting of 10-15 gap filling activities along with the answer key for each individual quiz. Later they exchanged quizzes with other groups. By doing this, they both had the opportunity to see and study phrasal verbs other than those they worked on and they experienced teaching as well. See visual 1 below.

2.7. Assessment Stage 1

Following the first practice session, the learners were given a quiz of 20 questions all of which were derived from the power point quizzes they previously made by themselves. They were also allowed to have these on their flash drives for further practice. However, much to our surprise, the experimental group scored lower than they previously did on the pre-test, most possibly due to some motivational deficiency that led to some minor changes in the following practice sessions.

2.8. Practice Session 2

After seeing the results from the first quiz, we went for a different kind of practice activity and again we divided the group into groups of 3-4 learners.

Visual 2. Learners working on concordance lines
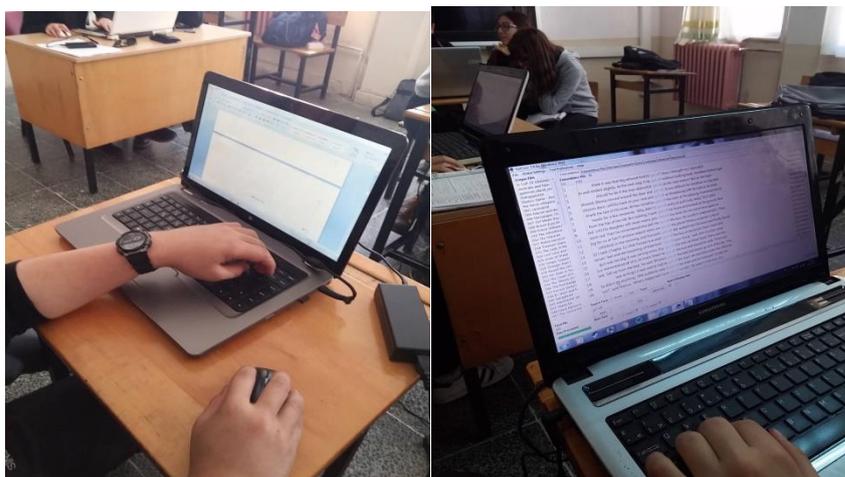
This time, we instructed the learners to go through the corpora and discover the most frequently used phrasal verbs as well as the least frequently used ones. By doing this, the learners had the

opportunity to compare multiple number of examples for each phrasal verb. The final outcome of this practice stage was a chart on Microsoft Excel, showing a list of phrasal verbs with sentences in which they are used starting from the most frequently used ones to the least frequently used ones. The learners spent four classroom hours doing this practice.

2.9. Assessment Stage 2

In order to see whether this second practice stage that the learners went through using corpora and DDL techniques had any positive effect on the learners' use of phrasal verbs we designed another assessment tool of our own similar to the one previously used in assessment stage 1. Again, the quiz consisted of gap filling and error correction questions focusing on the contextual use of phrasal verbs. This time the average score of the experimental group was twice the score they got on the first one with 60 points.

2.10. Post-test and Findings

The final stage of quantitative data collection was the application of a post-test following the practice and assessment sessions during the process. As it is usually suggested in the DDL literature, we applied the post-test two weeks after the final practice and assessment periods. The post-test we applied is exactly the same material as the pre-test; however, the learners were unaware that they were taking the same test after 4 weeks having spent working with corpus inquiry tools to better understand how prepositional collocates of verbs work in context. This practice also provided the learners with a substantial amount of reading in the target language.

The results of the post-test clearly showed that students had developed a better sense of how English works in the specific case of phrasal verbs. While the average score of the experimental group on the pre-test was 50, they scored 75 on average, demonstrating a steep increase. This result indicated that DDL techniques and the learners' self-effort put in favour of their own learning did work, indeed.

2.11. Triangulation of Findings

2.11.1. Paired Sample T Test on SPSS

In order to support our findings quantitatively, we referred to SPSS paired sample T test procedures. The reason that we went for paired sample T test on SPSS is that it is commonly preferred when researchers aim at seeing the difference between the application of a new method, cure or medication.

Likewise, in our research, we wanted to see whether DDL techniques that we applied worked in favour of our learners' collocational competence of understanding and using prepositional collocates of verbs. For this purpose, we applied a pre-test before and a post-test, which is actually exactly the same test as the pre-test, to see the change in the learners' control on phrasal verbs.

When we entered the data pertaining to pre and post-test scores of the experimental group, the software showed us that there is a significant change yielded by DDL applications in the classroom. Having given *Sig.(2-tailed)* value *0.000<0.05*, the software demonstrated that there is a significant difference in the test results and a substantial increase in the performance of the learners throughout the period spent with DDL methods. The following statistical information shown in charts prove that classroom concordancing works well with teenagers of generation Y in terms of language learning. Another implication that we derived from these results seen below is that, the adaptation of computers, within the framework of Computer Assisted Language Learning (CALL), fosters and triggers the learners' capability to integrate technology for self-development and language learning independent of a mentor or an outer authority, putting the learner in full responsibility of their own learning, both inside and outside school premises as the technology needed for DDL is quite easy to access in today's Turkey.

Table 5. Computer analysis of Pre-test and Post-test results on SPSS

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	50,9091	11	17,65477	5,32311
	POSTTEST	75,2727	11	11,42008	3,44328

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRETEST & POSTTEST	11	,402	,220

Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower
Pair 1	PRETEST - POSTTEST	-24,36364	16,72885	5,04394	-35,60223

Paired Samples Test

		Paired Differences 95% Confidence Interval of the Difference Upper	t	df	Sig. (2-tailed)
Pair 1	PRETEST - POSTTEST	-13,12504	-4,830	10	,001

2.12. Analysis of Qualitative Data

Throughout the period spent, the teacher carefully monitored the leaners' discussions and talks among themselves and with the teacher on the usefulness of DDL techniques along with the difficulties reflected in the utterances by the learners, taking field notes. Some learners explicitly expressed that they felt themselves becoming better with phrasal verbs as they got more into DDL.

ST 1: "I can't believe that I am better in such a short time"

ST 2: "Honestly, I didn't think corpus would work in the first place"

ST 3: "I think there is no other way that I can see this many example all at once"

Some others asserted that things that used to be hard and complicated started to become clearer in time. Depending on what the learners said, we concluded that they would further be engaged with AntConc and the database we prepared for this particular study for a better understanding of other forms and functions of the language elements other than phrasal verbs only. Many of the students came up with ideas on how to use corpora for further studies. We noticed that the learners frequently required ideas from the teacher on whether they could exploit AntConc and concordancing to learn English vocabulary better.

ST 4: "I think I will go on using corpus to learn more words"

ST 5: "Phrasal verbs weren't that much difficult, indeed. Can I learn more than phrasal verbs?"

Upon receiving their results after the final assessment session, the learners attitude towards using DDL techniques became more apparently positive. Some learners started to think

creatively and there were a number of others who searched the web for alternative corpus inquiry tools.

ST 6: "We can expand the content and use it for grammar practice as well"

ST 7: "Are we going to use other corpus software?"

ST 7: "I found other websites for corpus"

However, the period spent with DDL procedures was not totally problem free. The very first impression that the learners gave us when they had the first contact with DDL was that the interface was not appealing to the eye.

ST 8: "Corpus looks boring"

ST 9: "It should be more colourful and vivid"

ST 10: "The screen is full of words and I get tired while finding what I'm looking for"

ST 11: "It is not easy to decide which words I need"

Another criticism from the learners was that they needed to spend a lot of time to figure out different meanings of the phrasal verbs, and they needed to refer to dictionaries to understand some unknown words they encountered.

ST 12: "Can we use a dictionary to learn the words we don't know?"

ST 13: "I found the phrasal verb but the sentence is too hard for me"

All of these above suggest that when proper steps are followed during the integration of a new method including technology in the classroom, learners are ready to welcome new opportunities. With the true guidance of a teacher, learners can acquire the philosophy of corpus linguistics and discover the benefits behind the notion of data-driven learning.

Yet, the DDL technique and classroom concordancing seems to be in its infantry and needs developing. For this to happen, the effort put by volunteering teachers is crucial. Without the actual implications by in-service teachers, the drawbacks of DDL may not be able to be revealed to its full content resulting in abandonment of a new method with a seemingly bright future.

3. DISCUSSION AND CONCLUSION

As the constructivist language-learning theory suggests, learning occurs better if the learner is presented with opportunities to explore and discover language bits independently. The advent of computers has led the way to a collaborative atmosphere for computer-assisted language learning that facilitates and encourages learner autonomy.

The integration of interactive smart boards into the classroom settings in schools throughout Turkey seems to be promising in terms of learners' being exposed to naturally occurring language within the classrooms, thus ameliorating the understanding of the discrepancy between what is presented in the course books and what is occurring natively outside the classroom.

Data-driven learning, as it highlights learner autonomy, stands out remarkably as a means of delivering a sense of autonomy, consciousness of real language and a source of self-motivation. Thus, a teacher who is actively teaching should exert his effort to welcome all these sources in a unifying manner so as to enhance his teaching and learning for the sake of the learners as well.

Corpus inquiry tools offer a wide range of opportunities for learners of English to self-discover the realm of languages. However, the dull nature of the interface does not seem to be appealing enough for teenagers of the new millennium who are used to learning by seeing rather than reading. Improvement of mobile applications based on the basics of corpus linguistics may facilitate the integration of DDL techniques into language learning environments, especially for EFL classrooms.

In this particular study, in order to compensate for this handicap of the software, we simply made use of web 2.0 tools such as Kahoot (https://kahoot.it). Kahoot is an online web tool that provides the users with an opportunity to create instant quizzes that can be accessed via any smartphone, tablet or PC so long as they are connected to the web. Students, having signed up with for their own personal accounts, transferred the content of the PowerPoint slide quizzes they previously prepared into kahoot and created their own kahoots. By doing this, the learners found an opportunity to make use of the tablets they had been given by the Ministry of Education for the benefit of their own language learning.

Visual 3: Leaners preparing online quizzes to challenge peers from the class
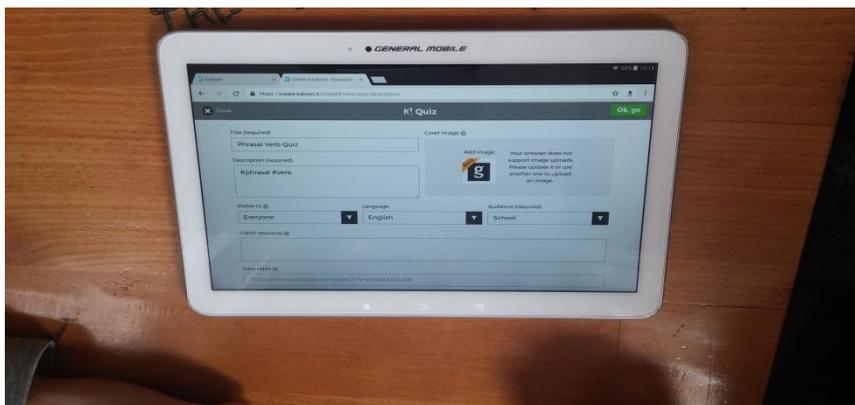
After each learner got ready with an individual online quiz, the teacher gamified the process and let the learners enjoy the outcome of their hard work within a competitive atmosphere.

The advent of mobile technology, enhanced accessibility of broadband and mobile internet connectivity and the completion of the technological infrastructure for CALL at state schools in Turkey offer language teachers valuable opportunities. However, the lack of proper and easy to use software with appealing interface may hinder the dissemination of the broader use of such techniques.

Another issue seems to be teacher training. In order for DDL techniques to become widespread, more and more teachers are needed to reach an awareness of the importance of the use of CALL techniques to be integrated into their actual classroom performances. Rather then merely depending on the course book and the needs of the learners for high stakes tests, language teachers should take on more responsibility and provide their students with wider perspectives on how to make better use of technology for language learning.

From this point of view, it can be concluded that DDL with further adjustments for classroom use can be of great importance presenting both the learner and the teachers with opportunities to get access naturally occurring language, if not, native like content at least. Supported by other methods, techniques and tools that adopt and welcome the use of technology in language classrooms, DDL can open up new horizons for every stake holder for national goals of education in Turkey.

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