Revisiting Language Learning Through the Self: Discovery Learning in the 21st Century[1]

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Abstract: In such countries as Turkey, where EFL (English as a Foreign Language) is the basic language teaching policy, the incorporation of grammar into language teaching has proven to be a must. However, to eliminate the concerns that revitalizing grammar in language classrooms might be resuming to traditional classrooms, the methodology to be adopted seems to be of vital importance. This paper aims to characterize a corpus based discovery learning procedure, in which learners are subjected to specific questions and experiences in such a fashion as to discover a given concept. This study offers a procedure that uses the Corpus in the classroom to teach a pre-determined grammar focus item.Unlike traditional ways, with this approach, learning can be facilitated through a specific teaching methodology, arousing a curiosity as well as posing a challenge. Thus, while the language focus is not limited to a discreet grammatical item, it is presented in a context, mainly sketched by corpus linguistics.The course methodology suggested in this article could inspire new insights into teaching lexico-grammar in EFL contexts by utilizing the facilities of ICT (Information and Communications Technology).

Keywords: *ICT, discovery learning, self, language learning, corpus*

1. Introduction

English language teaching has witnessed a wide range of variations as for the importance of grammar and the mode of its delivery in the learning environments. In addition to the clash of heads over the methodology of teaching this basic language component, the fashion it is dealt with has displayed different trends from period to period in line with the considerations employed in its vitality.

In such countries as Turkey, where EFL (English as a Foreign Language) is the basic language teaching policy, the incorporation of grammar into language teaching has proven to be a must (Larsen-Freeman, 2001; Borg & Burns, 2008 among others), and innovative language teaching methodologies accommodate grammar as a vital part of language learning, relying on the findings of SLA (Second Language Acquisition) research (Doughty & Williams, 1998; Lightbown, 2000; Mitchell, 2000; Doughty, 2001; Ellis, 2001; Pica, 2005). As a step towards such a new attitude towards grammar, Conrad (2000) states that in the last decades of the 20th century, exciting improvements occurred in terms of grammar teaching, and most of the ESL

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grammarians would agree that by the end of the 20th century, besides other factors, corpus linguistics also changed grammar research drastically.

However, to eliminate the concerns that revitalizing grammar in language classrooms might be resuming to traditional classrooms, the methodology accompanied by the techniques and materials to be adopted is of fundamental significance. In this respect, to revolutionize the notion of grammar, this paper aims to characterize a corpus based discovery learning in an advanced language class, in which grammar instruction takes place inductively. While the learning is centralized on discourse approaches, corpus is used for all forms of language pedagogy in a meaningful context, practiced through the receptive and productive skills (Celce-Murcia & Olshtain, 2005). The assumption is that through discovery learning, the language focus is not limited to a discreet focus of grammar item as focus on forms; on the contrary, it is presented in a context drawn from a corpus, mainly sketched by corpus linguistics norms (Biber & Conrad, 2001). The course methodology suggested in this article could inspire new insights into teaching lexico-grammar in EFL contexts by utilizing the facilities of ICT (Information and Communications Technology).

2. From The Corpus Theoretical to The Corpus Applied

Despite the abundance of research and related articles on the availability of corpus for reference purposes in the fields of grammar and vocabulary, the actual classroom procedures do not take place in corpus based studies. Most of the descriptive work, and those giving a detailed account of the possible usages of a 'search' item are restricted to theory to a large extent, and in most cases, they cannot serve as a source for the need of practitioners who wish to adopt an innovative methodology for teaching a language, particularly grammar. The corpus offers massive data for lexico-grammar, the interface between the lexicon and grammar, and some evidence for the actual usage of grammar in context. Therefore, what is left to the practitioners is to master the raw data for the interpretation and utilization.

Conrad (2005) defines corpus as a "large, principled collection of naturally occurring texts that is stored in electronic form". Besides, she explains 'naturally occurring' as the production of the texts by users of the language for a communicative aim, unlike the texts that have been created for studying or teaching. This shows that the emergence and frequency of a search item in a corpus shows a lot as to its actual place, frequency and value in a language. Any search in order to have access to the concordance data occurring in the form of phrases or patterns would display a substantial lot of knowledge for the function of one particular word or phrase in a context, also suggesting invaluable information as to the other uses, not generally included in EFL course books and related materials. In this way, what concordances supply for the requirements of that specific language sometimes prove to generate outcomes that rarely or never come to the conscious attention of the language users, teachers, learners or curriculum designers. Therefore, it can be said that a comprehensive corpus is a tool to be exploited by language teaching methodology, without which the learning of a language in the real sense would not be a matter of claim.

To Conrad (2005), central to the definite philosophical principle is that language study is taught through experimental work in the first place, and for this reason, language descriptions and theories should be grounded on observations of language behavior. In this sense, corpus linguistics has made contributions to second language teaching since it puts on the experimental work of the enormous data bases of the language. Considering what corpus offers in terms of the context, Jolly and Bolitho (2011) state that thanks to corpus analysis, it has become possible for

language learners to see the big picture at the text and discourse level. In the same vein, Byrd (2005) states that a discourse based point of view focuses on meaning and communication in the first place, and it derives structure from the communication types for the learners.

Discovery learning and teaching as a pathway to inductive instruction refers to a type of curriculum in which learners are subjected to specific questions and experiences in such a fashion as to "discover" for themselves and the concepts intended (Hammer, 1997). In this way, discovery learning arouses the curiosity in the learner's mind while also posing a challenge, which is one of the most effective paradigms of learning. Castronova (2002) states that discovery learning is an approach to learning that can be facilitated through specific teaching methodology and guided strategies of learning. Therefore, it can be said that for the learning to become meaningful, teachers are supposed to involve the students in this process. This makes the learning exciting, and the learnt part permanent as is suggested by Santamaria Garcia (1995), which highlights the possible contribution of the concordances to the retention levels of the students. Moreover, Chambers (2005) emphasizes that studying through corpora and concordancing take place in a language learning environment since they lead to learner autonomy and discovery learning.

Despite the availability of corpus based descriptions of linguistic items, the steps to be followed in the classroom remain limited, and this article aims to contribute to this restricted field. With this view, as the entity of focus, "If Clauses", one of the parametric variations from the cross-linguistic point of view, have been selected, for they are known to pose a challenge for EFL learners (Girgin, 2011). Therefore, this paper is centered on teaching these structures through the concordance data by using discovery learning as a classroom application.

3. The Classroom Procedure

Corpus as a practical and contemporary utility for teachers requires a cautiously selected teaching fashion for fruitful results. Therefore, being able to take the sequential steps contributes to the pedagogical content knowledge of a teacher, a cornerstone for teacher competency. The procedure is based on DDL (Data-Driven Learning), the use of computer-produced concordancers (Johns,1991) to discover formulaic expressions and syntactic regularities though it seems to be appropriate for the proficient learner, the lower-level proficiency remaining doubtful (Barbieri & Eckhardt, 2007). The classroom procedure designed in this article as a sample application aims to help teachers, who wish to work with the Corpus, gain insight into the use of this tool for a revolutionized grammar teaching.

1- Prior to the classroom application, the teacher goes through the corpora to find the right context for the teaching process, for it provides data to reach the language with its components instead of a language in isolated forms. Ellis (2008) highlights the vitality of formulaic parts of language in early language acquisition, and adds that a notional functional approach can function as a perfect tool for the teaching of such chains; however, for a language syllabus to be considered as complete, the improvement of formulaic phrases and rule-based knowledge needs to be supplied. In order to fulfill this need, the teacher does some search on the corpus to find out the distribution of the lexico-grammar item according to the sections and sub sections of the corpus. This search helps observe the frequency of the focus entity in different fields of discourse, which will lead the teacher to decide what discourse fragment is to be given more weight while designing the syllabus.

2- As the next step, the teacher examines the concordance data (Johns, 1991), and selects the appropriate sentences to bring to the attention of the learners in a context. The purpose of this preliminary work, unlike most users practice, is not to display the outcome of the corpus before the learners' eyes, but to select and accumulate the lot to be used as course material for the elimination of the possible pitfalls the learners might encounter on the way.
Being the conscious participant of the learning-teaching process, the teacher picks fragments of discourse in line with the level of the learners. The aim is to eradicate the challenge of new words that prevents the observation of the grammar data. No simplification of the course material is advisable at this phase since the corpus provides the authentic segment of the language, which is desirable for a good source of input. A slight challenge made for the learner as for the comprehensibility of the input (Krashen, 1985) could serve as a drive since learning is not simply comprehending, but it is also striking a balance between the input and the intake, and the challenge is the pulling force of the learning experience. Moreover, since each search item is embedded in a context, if a need arises, the learning can progress through the discourse the corpus fragment is extracted from by clicking on the node.

3- The teacher designs a mini-corpus, based on the uses of "If" to bring to the conscious attention of advanced learners of English. This procedure aims to achieve the chance to probe the behavior of words and describe the use of that word in its real form. In this part of the course, the teacher supplies input through one of the receptive skills to imply that "If Clauses" will be the focus of the study. In line with the philosophy of inductive teaching, the learners are expected to infer that conditional sentences are on the agenda of the teacher.
To Conrad (1999), corpus-based research eases the analysis of several characteristics of a feature in order that we can achieve a more complete perception of its use. Relying on this view, as the next step, the teacher projects the corpus on the screen while the learners are directed to observe through some sentences that lead to the functional occurrence of "If Clauses". The rationale behind this is that when learners encounter different functions under the same form, they see the actual and authentic use, free-standing although composed for a particular audience (O'Keeffe et al., 2007).

4- Then, the teacher reads the sentences from the mini corpus and asks the students to examine them carefully. For the new words, dictionaries are allowed, and when necessary, the teacher helps the students with meaning accommodation. After the overall examination, the students are grouped to work together and an activity paper including the study at Table 1 is handed out.

Table 1
Activity to discover the uses of "If" substitutes in the corpus

If 1 : If	Eğer
If 2: In case	Olursa diye/ Olması halinde
If (So) 3: Under the circumstances	Şayet öyle ise
If 4: Only If/ On condition that	Şayet
If 5: For the possibility that	Eğer
If 6: It is impossible now	Olsa idi
If 7: It is impossible/luckily	Olsa idi

5- The teacher directs the students to focus on the meaning supplied in Table 1 and to match these expressions with the suitable sentences drawn from any corpus that can serve for language teaching. The aim is to let the students discover that one form, in this case, "if" has different functions, and the shades of meaning is constructed through the other phrases in the sentence, even in the context for one form. The students are expected to make a link between the given meaning and the sentence including "If". In this way, the teacher prepares the whole course procedure, but does not interfere with the discovery process which leaves the learners on their own "selves". The teacher role has been identified to be moderator and facilitator (Richards, 2005) while the learner role as active participant, who is responsible for the autonomous, constructivist "self" learning.

6- Having accomplished the matching and provided the right answers, the teacher tells the students to replace "if" in each sentence with the expression given in Table 1, and to read the meaning once more. In this way, meaning variations can be observed, which confirms the fact that one form can potentially represent many meanings, and that these meaning constructions are supplied through other members such as tenses, modals, time expressions in the sentence, not solely by the grammatical item in its own right.
Ex.1. If you touch this button, the door opens instantly
        When you touch this button, the door opens instantly.

7- As the final step, the teacher arranges the students in groups so that they can focus on the patterning and regularities (Meunier, 2002) in the mini Corpus, and they can reach a consensus over the syntactic description of each use. The purpose of this step is to have the students gain awareness that "If Clauses" are not restricted only to the tenses and time expressions as it is traditionally included in the grammar books; on the contrary, the wide array of usages in different sections of language pinpoints that the shadowed functions, lying in the interface between syntax and semantics exist there, and it is left to the PCK (Pedagogical Content Knowledge) (Shulman, 1986) of the language teacher to unearth such constructions. In this way, students are encouraged to use the corpus for the real functions of a language item in addition to those defined in grammar books. Having rounded up the meaning-based studies, the teacher directs the students to group the sentence clusters under the common functions (See Table 1), and lets them write possible syntactic patterns required for each group. The basic aim of this work is to let the learners see that a grammar item with different functions varies in structure.

4. Conclusion and Implications

The procedure mentioned in this paper aims to sketch a classroom application for the new generation teachers who teach digital natives (Prensky, 2001) by using innovative tools. Unlike traditional teachers, these contemporary teachers act like competent drivers, who take their passengers to the other side of the river, after which time the commuters become aware that they have gone ashore. This "Invisible Bridge" metaphor can be applied to formal education systems, in which learners learn without their conscious knowledge for some time, after which they place this meta-linguistic knowledge as the rules of grammar and use it to edit their productive skills. The important point at this stage is to evoke the interest of the students, who actually tend to have an inquisitive mind in the early years of their learning experiences, either getting dull or disappearing totally as they grow up. However, it is a fact that through the use of questioning, the

core value of inquiry-based pedagogy puts stress on the discovery learning and the development of learners' cognitive skills and metacognitive strategies. (Lee, 2014). Additionally, through exploring and problem solving, students take on an active role to create, integrate, and generalize knowledge (Castronova, 2002). If learners are considered to have these features, corpus-based studies make a perfect match for their learning styles.

As for the advantages of the corpus; firstly, it can be said that the teaching and learning process becomes enjoyable for both parties. For the learners, this type of learning arouses curiosity since discovering something new lies in the very heart of human beings, which calls for the effort to find out the new information. In addition, "when you do your best for something, you try to own and keep it" philosophy creates learners who assume the ownership and responsibility of their own learning. Secondly, students improve their cognitive and research skills as well as the knowledge about grammar. Thirdly, students incidentally learn (Read, 2004) new words they coincide while going through the corpus data, which provides them with rich materials unlike those in traditional sources. Thus, the onset for learning one specific item has its extra gains with many new words in a context. The final benefit for the learners is the access to the information about the morpho-syntax; namely, lexical patterns included in practical and accessible materials. Moreover, thanks to the word frequency lists, enquiry across different corpora, different varieties and different contexts of use is facilitated (O'Keeffe et al. 2007)

The advantages of the corpus for the teachers is countless. Firstly, it eases the teacher's job. Corpus exploits the opportunities of technology, and teachers have the chance to have access to a great deal of concordance data from different walks of life (spoken, written, academic, formal, and informal) with just one click. Sinclair (1996) points out that extensive compilations of language texts in digital form have been accessible to academicians for almost forty years, and a perspective of language form that has not been available before is offered with the corpus. Besides, the authentic language in a context is like a plant with its roots, which means the language plant can be stored and kept in the mind for a long time. The authentic material also presents some usages not normally mentioned in grammar books (See Table 1), for the corpus includes contemporary language portions, which can be obtained by extracting the concordance data. Secondly, when teachers work under the light of the data from the corpus, they can eliminate the word clutter they have to use to describe and explain a grammar item. A traditional teacher is supposed to use the terminology about grammar, "If Clauses" for instance, to raise the consciousness level of the learners (See Fig. 1).

Terminology used to teach "If clauses" in traditional classrooms		
Type 1, Type 2, Type 3, Type Zero, Mixed Type	Present, Past, Future, Tense, Simple Present, Simple Past, Past Perfect, Present Perfect	Main Clause, If Clause, Subordinate Clause, Implied "if", Imperative, Modal, Condition, If, Unless, If not, Hypothetical, Real, Unreal

Figure 1. Terminology used to teach If Clauses

Therefore, students talk about "If Clauses", but they cannot apply them, for they have learnt a lot of features about "If Clauses" except how they can be used accurately with the right style and register. In other words, they can tell all the recipes of a cook book by heart; however, they cannot cook a single meal and serve it to the table. On the other hand, seeing many examples of the same item in a corpus clears the path for more accuracy and productivity since this type of learning penetrates into the unconscious mind of the learner before the teacher voices the rules as the final step of the inductive instruction.

Teachers can make use of the corpus ideally once they get used to utilizing this tool during their teaching. For this to realize, teachers should have a contrastive point of view, which helps them discover the variations across languages. With this outlook to the corpus, it becomes possible to interpret the data offered, and this shapes the material the teacher brings to the conscious attention of the learners as suggested by Meunier (2002), which remarks that learning from the corpus is especially appropriate for consciousness-raising activities, mainly in the fields of lexis or lexico-grammar.

Additionally, teachers should keep the mother tongue on the agenda, for different functions of the same form can be disclosed with the help of one's native language. When two languages are compared and contrasted by resorting to translation, the whole picture can be seen as for the differences of use. Besides, teachers should consider teaching as a problem solving phenomenon, and think that the more they are involved in this process, the better solutions they can create.

In conclusion, this article highlights the current delivery modes of grammar, and it suggests that instead of resorting to the tools provided by the traditional teachers, contemporary teachers could initiate learning environments through the learner's self by means of discovery learning. The right tool for such a procedure is the corpus, which offers a great deal of spoken and written discourse to the teaching and learning environment. Sinclair (1996) states that a teacher needs a modest adaptation to the practices included in obtaining information from the corpus, most vitally, training and experience in how to evaluate this information. This orientation could be accomplished at ITE (Initial Teacher Education) programs by integrating corpus linguistics and its implications into the curriculum for the future teachers who have a good computer literacy. Besides, INSET (In Service Teacher Training) platforms are ideal environments for teachers' orientation towards utilizing and evaluating the language corpora while teaching English.

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