Towards a Dynamic Way of Learning Collocations in a Second Language[1]

Margarita Alonso Ramos

Universidade da Coruña
Campus da Zapateira s/n, 15071 CORUÑA (SPAIN)

Abstract
The aim of this paper is to draw attention to the need for a new type of on-line second language learning environment in the field of collocations. Although nowadays it is increasingly acknowledged within the applied linguistics community that collocations need to be taught, the resources for teaching and learning them are still far from being sufficiently refined. We examine the main features of electronic collocational resources which currently exist for English, French and Spanish as a foreign language, showing that, in general, they have significant shortcomings. We are building a didactic module for Spanish associated with the collocation database currently under construction, *Diccionario de colocaciones del español* (DiCE). As in the fields of lexicography and translation, here we claim that computer assisted language learning also requires the creation of new tools with an integrated interface that allows access to dictionaries, the corpus and the didactic module.

1 Introduction

Over the last few years, research into collocations in the area of acquisition of a second language has become increasingly important (Granger 1998, Howarth 1998, among others). It is widely known that the lexical approach has drawn the attention of the teachers to the role played in a language by lexical chunks, including collocations (Lewis 2000). Although nowadays the applied linguistics community accepts the need for teaching collocations, we consider that the resources for teaching and learning them, in those cases where they exist, are still far from being sufficiently refined.

In the case of Spanish, there is a considerable lack of resources for teaching and learning collocations, starting with the absence of a collocation dictionary, as noted by many specialists in Spanish as a foreign language (Penadés 2004; Cordero Raffo 2005; Ruiz 2005; Higueras 2005). This is one of the reasons that led us to undertake the task of compiling a collocation database, based on Explanatory and Combinatorial Lexicology (Mel'čuk *et al.* 1995): the *Diccionario de colocaciones del español* (henceforth DiCE, Alonso Ramos 2001,

---

2002, 2004). Unlike other lexical resources which are a computer replication of paper-based dictionaries, the DiCE has been conceived as an electronic lexical database, a demonstration of which is available on the web.[2] This enables us to provide more information, to implement flexible access and to build up an associated didactic module which can be used autonomously by learners of Spanish.

In this paper, our aim is to lay down the guidelines for an on-line learning environment of collocations in Spanish as a second language (although it could be also useful for native speakers). We intend to show that it is possible to devise an environment which is more dynamic than existing resources for other languages. By *dynamic*, we refer to a tool which supports the autonomy of the learners by providing them with an integrated interface with access to a range of sources such as several dictionaries, corpora, including the Internet, and a range of didactic activities.

The structure of this paper is as follows. We will start by examining the main features of some of the current collocational resources for teaching/learning collocations in English, French and Spanish as foreign languages. After a short description of these resources, we will list the difficulties involved. We will then go on to put forward several proposals for a new environment, placing the emphasis on an interface which integrates several resources and allows easy access to corpus. The fourth section begins with a brief presentation of the dictionary and the didactic modules of the DiCE as they currently stand before outlining what needs to be done in order to bring the DiCE in line with a dynamic learning environment. Finally, we will draw various conclusions and will plan future work.

2 Overview of some collocational electronic resources

We have chosen to focus on electronic resources as they allow for a flexible use which supports learner autonomy. As Nesselhauf and Tschichold (2002: 251) have pointed out, a Computer Assisted Language Learning (henceforth, CALL) program is especially suitable for learning vocabulary since vocabulary is one of the fields that can be easily practised outside the classroom. We have based our choice of resources on two requirements, namely: 1) the inclusion of exercises or didactic activities on collocations; 2) a lexicographic description of collocations. These conditions yield resources of a very different kind. Without intending to provide an exhaustive list, we have chosen the following resources: for English, two electronic dictionaries, the *Oxford Phrasebuilder Genie* (OPG, 2003), and the English section of the bilingual French-English *Dictionnaire Cambridge Klett Compact* (DCK, 2002). In the case of French, we have examined the exercises on collocations included on the Alfalex website which has a direct link to the online dictionary *Dictionnaire d'Apprentissage du Français Langue Étrangère* (Selva et al. 2002 and Verlinde et al. 2003). The other resource for French we have analysed is the *Dictionnaire des collocations*[3] (DC) which includes sev-

---

[2] The addresses are: http://www.dicesp.com and http://dicesp.cesga.es.

[3] Developed by Toni González, this dictionary is available on the web at the following address: http://www.tonitraduction.net/.

eral exercises designed for Spanish learners of French. Given the scarcity of collocational resources for Spanish,[4] we have evaluated the programmatic ideas put forward by Moreno Pereiro y Buyse (2003), Alonso Raya (2004), Morante (2005) and Higueras (in press), and several didactic activities hosted on the Centro Cervantes website.[5] Our review shows that in spite of the claims made by supporters of the lexical approach, collocations are still largely overlooked in CALL. Unfortunately, the situation has not changed greatly from that described almost twenty years ago by Heid (1986) and our results also confirm those obtained by Nesselhauf and Tschichold (2002) following their review of several vocabulary-building software programs for English as a foreign language.

2.1 A Brief Description of Collocational Resources

From the four resources reviewed which meet the requirements laid down, only the OPG and the DC focus on collocations and only the OPG and Alfalex have an associated learner monolingual dictionary. All resources target learners.

In spite of the different types of resources, all the exercises on collocations are approximately of the same type. Most consist of sentences in which one element of the collocation is missing. The task consists of filling in the gap, either by typing in the missing element, or by clicking on one of options (the first type is considered to be more suitable for advanced learners than the second). Here an example of both types is given. The first one comes from Alfalex:
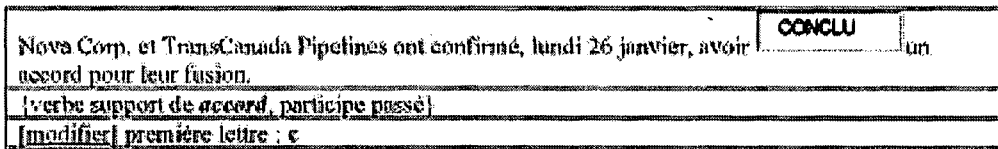

Figure 1. Example of a cloze test from Alfalex

The example of the second type is taken from the DCK. In these cases, the learner has to click on the correct collocate:

---

[4] In the overview presented by Cruz Piñol (2002 and 2004) and by Martín Mohedano (2004), we are unable to find any websites dealing with collocations. A similar situation occurs in the case of paper exercises: for example, in the Anaya collection entitled *Ejercicios de léxico* (Martínez Menéndez 2001), there are no exercises designed to practise the use of collocations. Fortunately, teachers of Spanish will soon have at their disposal an extensive list of activities focused on collocations in Higueras (in press).

[5] At the following addresses http://cvc.cervantes.es/aula/didactired/didactiteca/ and at http://cvc.cervantes.es/aula/pasatiempos/pasatiempos2/ it is possible to find a few activities on collocations.

| Mr Stout (fell/got) ill with malaria and died a few days later in hospital. |
| He was rushed to hospital with (big/serious) head injuries. |
| The government has recently (made/passed) a new law designed to restrict logging. |

Figure 2. Example of an option selection exercise from the DCK

Matching exercises are also commonly used. Here, bases and collocates are organized in columns and the learner has to match them. An example of this type can be found in the DC. The learner has to match the nouns in the first column with the adjectives in the second column. Below is a brief example:

accent	facile
abri	fraternelle
abonnement	chantant
accord	payant
accolade	antiatomique

Figure 3. Example of a matching exercise from the DC

This type of exercises is similar to traditional paper and pencil exercises, leading Martín Mohedano (2004: 28) to refer to "cyber-structuralism". However, we believe that the acquisition of lexicon and particularly of collocations has to rely to a certain degree on rote learning and repetition (Nesselhauf 2005: 264) and in this case, traditional structural exercises can be an effective tool. The problem lies not in the type of exercises but, as we will see later, in the way they are implemented. We agree with Nesselhauf and Tschichold (2002: 274) that CALL offers many inherent advantages, such as providing direct feedback, giving learners more autonomy and the possibility of using several resources simultaneously. The poor results of our resources cannot be blamed on the cloze or matching exercises, but instead on the inappropriate use of the electronic medium.

2.2 Problematic Aspects of Collocational Resources
2.1 Focus on the bases

Since the collocate is the unpredictable and therefore most difficult part of the collocation for the learner, it would seem evident that collocation practice should focus on the collocate instead of the base. However, the exercises of some resources have been devised around the base. For instance, the 4,089 collocation exercises of the OPG feature a gap that must be filled in using the base; for example: *Now, don't start to get –.* The user finds it hard to know what the correct answer is and is unable to look it up because the collocation *to get gloomy* will be registered in the entry for *gloomy* but not in the entry for the collocate *to get*.

2.2.2 The lack of a link between the exercise and dictionary modules

In some resources such as the DCK, the interface fails to integrate the exercise and the dictionary modules in a dynamic manner, and consequently, when the learner wishes to con-

sult the dictionary, the exercise window disappears and he is forced to begin again. This problem would not be so serious if the information asked for in the exercises were provided in the dictionary module, but this is not always the case. Thus, when trying to choose between *big/serious head injuries*, as featured in an exercise, the user will be unable to find anything of help in the entry for *injury*, nor, of course, in the entries for the adjectival collocates *big* or *serious*.

2.2.3 The lack of semantic hints

Different meanings of a word frequently combine with different collocates. For instance, the noun *argument* combines with the collocate *to have* in the sense of an 'angry discussion', but it combines with the collocate *to put forward*, for example, when it means 'a reason supporting opinion'. Instead of exploiting this feature to teach different meanings of a word, some resources provide practice for the collocates of all the meanings of a base at the same time. In Alonso Ramos (2005) we discussed the problems that a learner of English faces when doing exercises included in the *Oxford Collocation Dictionary* without a monolingual English dictionary because the exercises often require the ability to make fine distinctions between the meaning of the collocates.

2.2.4 The lack of grammatical hints

Most of exercises are devised to identify the elements which constitute the collocation, namely the matching between the base and the collocate, yet they fail to attract the learner's attention to the use of the collocation as a whole. Thus, the learner notices that *to pass* and *law* constitute a collocation, but is given no information as to how it should be used or its meaning. Is it the same as *to adopt a law*? Nor is he provided with any details of the syntax of the collocation. Is it possible to use the noun without a determiner, as in *to pay attention*? Which preposition governs another complement, *to pay attention to/towards/for/at something*? None of these issues are addressed in the exercises reviewed, a fact which fails to surprise us as the actual dictionaries themselves also fail to describe them.

2.3 Some positive aspects worth retaining

Both English CD dictionaries can be considered efficient in terms of searching for the word in the nomenclature. In the OPG, the user types in the word he wishes to look up and the dictionary lists all those entries where the word appears as a collocation base (the headword of an entry) or as the collocate in the entries of other headwords. Similarly, the DCK returns all the headings where the required word is dealt with.

Alfalex deserves a special mention due to the system it has developed in order to provide the learner with feedback. Instead of indicating a "correct" or "wrong" result as the other resources do, Alfalex offers a link to its associated dictionary to complement the answer to the exercise. Other aspects of this type of feedback are discussed later.

3 Proposals for a dynamic online collocations learning environment

We have opted to divide the proposals into two parts: the first one deals with the content of the resource and the second its architecture.

3.1 Concerning the content of the resource

As far as the content of a useful collocational resource is concerned, we list only three suggestions which will be exemplified in section 4 with the DiCE: (1) the information in the dictionary must be introduced from the base and the exercises must focus on the collocate;[6] (2) the dictionary must contain semantic and syntactic descriptions of the collocation and the exercises have to provide practice in these aspects; and (3) the examples included in an electronic medium can and must play a more important role. It is widely acknowledged that learners value examples more than anything else.

3.2 Concerning the architecture of the resource

With regard to the architecture of the environment, we propose an integrated interface which connects several resources. Advanced learners require an interface that provides them with access to a wider range of sources, beginning with the consultation of the corpus, and extending as far as associated monolingual and bilingual dictionaries. The tool must promote learners' autonomy and provide them with context-sensitive online resources. As many CALL specialists have pointed out (Hanson-Smith 2001, among others), data-driven learning is particularly useful for advanced learners. Sala Cajal (2004) states that her advanced learners of Spanish are demanding concordances when they ask for more contextual information with real examples for their dictionaries. In the same way, Milton (in press) emphasizes the need for tools which help students to become independent writers. Below, we will outline a possible dynamic website catering for inductive modes of learning collocations.

3.2.1 Dictionary Module-Didactic Module Linkage

The combination of the dictionary module and the didactic module represents a definite improvement for the tool. The resource interface must allow the user to complete the exercise and consult the dictionary. In fact, we are convinced that this one is the most attractive feature of an integrated language learning environment. Such is the case of the OPG, but unfortunately this possibility is not useful in the case of collocation exercises for the reasons discussed above. The answers to the exercises must be implicitly or explicitly included in the dictionary. The interface has to be devised in such a way that it can be used differently from in a paper-based dictionary and in didactic activities. When doing the exercises, the learner could formulate more direct queries regarding the information included in the dictionary. Instead of simply opening the entry of a given headword to look up information, ideally the learner should be able to navigate around the data using a search engine. Thus, for example, if an exercise deals with the verb *reach* as a collocate, the interface should allow the learner to consult which other bases this verb forms a collocation with.

---

[6] The focus on the bases should not prevent us from also offering activities on the collocate. As Nesselhauf (2005: 266) points out, if a collocation such as *reach a conclusion* is learnt in isolation, the learner remains unaware of the potential and restrictions of this verb (*reach a decision, a conclusion, a compromise, a goal,* etc.). Therefore, several collocations with the same collocate should be taught simultaneously. For this type of activity, the Spanish dictionary *Redes* (Bosque 2004) may prove useful.

The linkage between two modules should not only provide assistance in doing the exercises but also with the correction process. Since a CALL program has the advantage of providing direct feedback, it would be more effective if instead of merely giving "yes" or "no" answers, it offered some explanations or references to the section where the dictionary deals with the problem in question. The resources should therefore include not only testing, but also teaching.

A further advantage would be the ability to provide flexible feedback allowing alternative answers, especially in the area of collocations. We would like to draw attention to the fact that the criteria used to determine whether a collocation is correct or incorrect are not always well defined. Nesselhauf (2003) uses the example of *to run a chance*: this combination can appear twice in a large corpus yet native speakers consider it unacceptable. In cases such as this, the learning environment should provide a way of indicating both possibilities. Likewise, certain mistakes are impossible to determine. For example, the same author mentions *to reach an aim* which can be corrected by *to reach a goal* or by *to achieve an aim*. A dynamic learning environment should provide both solutions when providing the correct options for the exercises.

Another way of making the learning environment more dynamic is to register the results of the exercises made by the learners. This idea has been already put into practice in Alfalex with excellent results (Verlinde et al. 2003). The user can look up the mistakes he has made and can ask the system for more exercises that target the same problem. The feedback is made up of five information columns: 1) the correct answer; 2) the learner's answer; 3) a reference to the associated dictionary; 4) a proposal for further exercises with the same collocation; 5) the possibility of adding the collocation to the student's personal dictionary. The register of incorrect collocations is in keeping with the philosophy claimed by the lexical approach and also error analysis (Blanco Picado 2002). Besides the benefits it offers the learner, the teacher can monitor the students' most frequent errors and can also be used to build up a learner collocation corpus (Nesselhauf 2005).

3.2.2 Corpus-Dictionary Linkage

According to Kilgarriff (2005), two ways to model the corpus-dictionary linkage can be distinguished: 1) to put pointers to dictionary senses into the corpus (as in a semantically annotated corpus) or 2) to put pointers to corpus instances of words into the dictionary. The first refers to the Word Sense Disambiguation research paradigm whilst the second to the modern corpus-based lexicography.

However, it is also possible to adopt a mixed approach. With the present methods of compiling a dictionary inductively from the corpus to the database, dictionaries also contain a corpus. This procedure converts the dictionary into an interface to the corpus. Thus, instead of using an ongoing annotated corpus, the corpus is accessed through the database dictionary. Since each register of the database can have a field with several examples from corpus, the dictionary itself contains a collocation corpus, a corpus which can be separated from the rest of information included in the dictionary. In order to exploit this corpus for didactic tasks, a search tool should be added. This tool would work in the same way as another concordance

program, but in this case the collocate is lemmatised. Learners would use this tool when they are not necessarily interested in looking up the entry of the base. For example, if a learner wishes to know whether the noun *afición* has a determiner or not when it goes with the support verb *tener*, instead of going to the entry *afición* and scrolling down to the information required, it would be quicker and more useful to launch the search tool which navigates around the corpus of the collocation dictionary. The tool searches for the cooccurrence between *afición* and *tener* and since the examples of the value *tener* are grouped by the lemma, the corpus does not require be tagged.

We also defend the benefits of linking the interface with a search engine like Google and with a reference corpus such as the *Corpus de referencia del español actual* (CREA) for Spanish. Besides providing learners with greater autonomy, the free corpus enables them to verify whether a collocation not included in the dictionary is simply an omission or it is due to the fact that this presumed combination does not exist. Since language is in continual evolution, the non-inclusion of a combination in the dictionary should not imply that this combination is incorrect. Links with the search engines or with CREA can be preformatted in order to assist users in their corpus search. Consequently, the interface toolbar can include a link which, when selected, opens a dialogue box. A good example of this resource can be seen in Milton (in press): the dialogue box of the Google Search warns learners that they may find non-standard examples that are not acceptable in the written language. The box makes it easier for learners to formulate queries, thereby avoiding the need to learn the use of asterisks or the Boolean operators that are typical of query languages.

3.2.3 Linkage with other dictionaries

A useful learning environment has to resemble the workbench which is already familiar to the translator (Rogers and Ahmad 1998). Even if we highlight the collocations, the interface would be more useful if the user could link up with other monolingual and bilingual dictionaries. The OPG is proof that the combination of a collocation dictionary and a monolingual dictionary makes for a better product.

In an integrated interface links with other dictionaries help to build up a more consistent tool and provide more resources in order to create more exercises. For example, one of the didactic activities proposed by Higueras (in press) focuses on the fact that a collocate may or may not have the same meaning in a given collocation as in a free combination. For example, the noun *mentira* 'lie' chooses the collocate verb *decir* 'to say' that has the same meaning as in a free combination (as in *decir una palabra* 'to say a word'). However, the noun *duda* 'doubt' chooses the collocate verb *aclarar* 'to clarify' and this verb has different meanings in different combinations; for instance, *aclarar la ropa* 'to rinse clothes' and *aclarar la voz* 'to clear one's throat'. In order to be able to do the exercise properly, learners need to consult several dictionaries. If they are sufficiently proficient in the language, a monolingual dictionary in the target language may be sufficient, but sometimes monolingual dictionaries, especially in Spanish, do not provide any information regarding the meaning of the lexical units in collocation. Thus, the meaning of *aclarar* in collocation with *duda* is not described in some monolingual Spanish dictionaries. Learners who consult a bilingual dictionary will find

the verb *to clarify* which maybe can clear up some points of this exercise, but the verb *to clarify* is not the equivalent collocate for the noun *doubt*: in English, this noun combines better with *to clear up*, *to dispel*, *to remove* or *to resolve*. Therefore, a collocation dictionary of the language of learner would constitute a useful additional resource.

The following section shows how some of these proposals could be put into practice in a collocational resource for Spanish.

4 Main features of the DiCE and its didactic module: present and future work

As mentioned in the introduction, although the DiCE project is still under development, a demonstration is already available on the web. In its present state, it responds to some of the proposals put forward in the previous section, especially those concerning the content. Here we will briefly present what is currently available and what can be done to improve the tool.

4.1 A Brief Description of the DiCE in its Present State

The DiCE can be characterized by the following three features: (1) each collocation receives a semantic and syntactic description; (2) each collocation is testified with several examples, most of which come from the CREA; and (3) is accompanied by an associated didactic module. Let us briefly examine these three aspects.

In order to describe the collocations, we use *lexical functions* (LFs), the tool of Explanatory and Combinatorial Lexicology (Mel'čuk *et al.* 1995). LFs have been used in the four volumes of the French *Dictionnaire explicatif et combinatoire* (Mel'čuk *et al.* 1984/1999), in the ongoing project *Lexique actif du français* (LAF, Polguère 2000), and now also for Spanish in the DiCE. An LF encodes the relation between two lexical units where one of them (the base of the collocation) controls the lexical choice of the other one (the collocate). For instance, the LF Magn encodes the relation between the following adjective-noun pairs: *honda pena* 'intense pain', *terrible vergüenza* 'deep shame', and *ferviente admiración* 'great admiration'. All three adjectives (the collocates) are selected to express, in combination with the corresponding noun, the same meaning – 'intense'. LFs are THE MEANS to describe collocations because they satisfy three indispensable requirements for a useful collocational resource: 1) they represent the meaning of the collocation; 2) they describe the syntax and the actantial structure of the collocation; and 3) they encode the functional dependency of the collocate in relation to the base. In order to make LFs easier to use, in the LAF and the DiCE, we have opted to use natural language *glosses* to encode the meaning of the collocations. Consequently, users who are unfamiliar with the language of LFs can access the collocate by means of the gloss rather than by means of the LF. For instance, the gloss for the LF Magn is *intenso* 'intense'. The gloss can be considered the translation of an LF in a natural meta-language (see Alonso Ramos 2005).

With regard to the second aspect, all collocations are supported by examples from the actual corpus. The DiCE is being compiled in an inductive way from the corpus. Therefore, even if the LFs constitute a grid which guides the search of the collocations in the corpus, the procedure is based on the data. This allows the DiCE to be used as a collocation corpus which, as we will see later, can be of great use to the learner. As an illustration, the informa-

tion for a collocation such as *morirse de vergüenza* 'to be very embarrassed' appears as follows:

sentir una vergüenza intensa **FL Magn + Oper₁**
morirse [de ~] Me moriría de vergüenza si supieran que mentí

As for the third aspect, the didactic module is still at a preliminary stage, but even so, the semantic and the syntactic description of collocations in the DiCE allows for more interesting exercises than those based exclusively on matching the base and the collocate. The didactic module is divided into two sections: one for production and another for comprehension. In both sections, we have included several types of exercises: some consist of choosing the correct answer and others of filling in the correct answer. All are automatically evaluated by the system. The sub-module includes various exercises devised to identify the correct collocate using their semantic description. Thus, users are asked to choose or to find the correct collocate starting from a gloss of the meaning. In order to find the answers to an exercise, learners can click on the dictionary and open the entry for the headword *ganas* for example, select the search "ganas + verb" and scroll the full list of collocates until they find those grouped by the gloss empezar 'to begin' and the LF IncepFunc1.

4.2 Planned Extensions of the DiCE

In line with the proposals put forward in section 3.2, future work will be based on the following lines. With regard to the linkage between the dictionary module and the exercise module, Alfalex is, without doubt, the model to follow. However, various improvements could be incorporated. For example, when the feedback offers to consult other collocations made up of the same elements, instead of showing all collocations listed in the dictionary with the collocate and with the base in question, it would help if the information were more precisely targeted: namely a semantic and syntactic description of the collocation with the associated FL is required, together with collocation examples from the corpus. If the user wishes to consult more collocations of the noun *admiración*, for example, a link to this headword in the dictionary should be available.

With regard to corpus-dictionary linkage, the structure of the DiCE allows for the inclusion of a search engine which navigates around the collocation corpus. The exploitation of the corpus included in the DiCE has the advantage of being semantically disambiguated. Unlike the corpus in free Internet search, the corpus of the dictionary has been already treated and disambiguated. Thus, when learners wish to know if the noun *admiración* combines with the verb *tener*, the search tool would return the examples separated in two groups, classified according to the various LFs: *tener admiración por alguien* 'to admire someone', encoded by the LF Oper1 and *tener la admiración de alguien* 'to be admired by someone', encoded by the LF Oper2.

With regard to linkage with other dictionaries, it would be desirable to connect the DiCE with the LAF. As discussed above, in the case of French and Spanish, two collocation dictionaries are being compiled with the same framework. It would not be very hard to devise ex-

ercises for a learner of Spanish or for a learner of French based on the information included in these dictionaries. Thus, for example, learners wishing to know how to express the meaning 'to make a doubt disappear' in Spanish or in French can look up the headword *duda* or *doute* and to search for the lexical function LiquFunc0 or its equivalent gloss in natural metalanguage.

5 Conclusions

We are aware that a more dynamic environment for learning collocations is a midterm research goal, but we are convinced that the DiCE has made considerable progress in this direction. We have attempted to show that there is another way of learning collocations. Our framework already accomplishes much of the work involved. Given that LFs constitute a formal language, they systematise the collocational information, and this structured information facilitates the integration of the dictionary and the exercise modules into an on-line language learning environment. However, several tasks still need to be addressed. In addition to continuing to compile the DiCE, the didactic module needs to be developed by putting the various proposals discussed above into practice. It must be clear that it will not be possible to create an authentic new language learning environment without the participation of applied linguists, theoretical linguists, computer scientists and teachers. We would therefore like to appeal for the collaboration of researchers from all the specialities involved.

References
A. Dictionaries
Bosque, I. (dir.) (2004), *Redes. Diccionario combinatorio del español contemporáneo*, Madrid, SM.
Crowther, J., Dignen, S., Lea, D. (eds.) (2002), *Oxford Collocations Dictionary for Students of English*. Oxford, Oxford University Press.
Gloeren, S. (2002), *Dictionnaire Cambridge Klett Compact*, Cambridge, Cambridge University Press. (DCK)
Mel'čuk, I. et al. (1984-1999), *Dictionnaire explicatif et combinatoire du français contemporain. Recherches lexico-sémantiques* I-IV, Montréal, Les Presses de l'Université de Montréal.
Oxford Phrasebuilder Genie, Oxford, Oxford University Press. (OPG)

B. Other Literature
Alonso Ramos, M. (2001), 'Construction d'une base de données des collocations bilingue français-espagnol', *Langages* 143, pp. 5-27.
Alonso Ramos, M. (2002), 'Un vacío en la enseñanza del léxico del español como lengua extranjera', in Braasch, A. and Povlsen, C. (eds.), *Proceedings of the Tenth EURALEX International Congress, EURALEX 2002,* volume II, Copenhague, CST, pp. 551-561.
Alonso Ramos, M. (2004), 'Elaboración del Diccionario de colocaciones en español y sus aplicaciones', in Bataner, P., DeCesaris, J. (eds.), *De Lexicographia. Actes del I Symposium internacional de Lexicografia*, Barcelona, IULA-Edicions Petició, pp. 149-162
Alonso Ramos, M. (2005), 'Semantic Description of Collocations in a Lexical Database' in Kiefer, F. et al. (eds.), *Papers in Computational Lexicography COMPLEX 2005*, Budapest, Linguistics Institute and Hungarian Academy of Sciences, pp. 17-27.
Alonso Raya, R. (2004), 'Algunas aplicaciones del enfoque léxico', *Mosaico* 11, pp. 9-13.
Blanco Picado, I. (2002), 'El error en el proceso de aprendizaje', *Cuadernos Cervantes de la Lengua Española* 38, pp. 12-20.
Castillo, M. A. et al. (coord.) (2005), *Las gramáticas y los diccionarios en la enseñanza del español co-*

mo segunda lengua: deseo y realidad. Actas del XV Congreso Internacional de ASELE (Sevilla, septiembre de 2004), Sevilla, Universidad de Sevilla.

Cordero Raffo, M. R. (2005), 'El problema de las colocaciones en las L2', in Castillo, M. A. et al. (coord.).

Cruz Piñol, M. (2002), *Enseñar español en la era de Internet. La www y la enseñanza del español como lengua extranjera*, Barcelona, Octaedro.

Cruz Piñol, M. (2004), 'La enseñanza de léxico en el aula de español como lengua extranjera', *Carabela* 56, pp. 171-187.

Granger, S. (1998), 'Prefabricated Patterns in Advanced EFL Writing: Collocations and Formulae' in Cowie, A. P. (ed.), *Phraseology. Theory, Analysis, and Applications*, Oxford, Clarendon Press, pp. 145-160.

Hanson-Smith, E. (2001), 'Computer Assisted Language Learning', in Nunan, D., Carter R. (eds.), *The Cambridge Guide to Teaching English to Speakers of Other Languages*, Cambridge, Cambridge University Press, pp. 107-113.

Heid, U. (1986), 'Wortschatzlernem mit dem Computer. Was taugen die kommerzialisierten Vokabeltrainingsprogramme?, *Zeitschrift für Sprache und Literatur in Wissenschaft und Unterricht* 58, pp. 68-84.

Higueras, M. (2005), 'Necesidad de un diccionario de colocaciones para aprendientes de ELE', in Castillo, M. A. et al. (coord.).

Higueras, M. (in press) *Las colocaciones y su enseñanza en la clase de ELE*, Madrid, Arco Libros.

Howarth, P. (1998), 'The Phraseology of Learners' Academic Writing', in Cowie, A. P. (ed.), *Phraseology. Theory, Analysis, and Applications*, Oxford, Clarendon Press, pp. 161-186.

Kilgarriff, A. (2005), 'Putting the Corpus into the Dictionary', *Proceedings MEANING Workshop*, Trento.

Lewis, M. (ed.) (2000), *Teaching Collocation. Further Developments in the Lexical Approach*, London, LTP.

Martín Mohedano, M. (2004), *La enseñanza del léxico español a través de Internet. Análisis y comentarios de páginas web*, Madrid, Edinumen.

Martínez Menéndez, P. (2001), *Ejercicios de léxico*, Madrid, Anaya.

Mel'čuk, I., Clas, A. and Polguère, A. (1995), *Introduction à la lexicologie explicative et combinatoire*. Louvain-la-Neuve, Duculot.

Milton, J. (in press), 'Resource-Rich Web-Based Feedback: Helping Learners Become Independent Writers', in Hyland, K., Hyland, F. (eds.), *Feedback in Second Language Writing: Contexts and Issues*, Cambridge, Cambridge University Press.

Morante, R. (2005), 'Modelos de actividades didácticas para el desarrollo léxico', *red ELE* 4, on line http://www.sgci.mec.es/redele/revista4/morante.shtml.

Moreno Pereiro, S., Buyse, K. (2003), 'Colocaciones léxicas: pistas y trampas', *Mosaico* 10, pp. 10-17.

Nesselhauf, N. (2003), 'The Use of Collocations by Advanced Learners of English and Some Implications for Teaching', *Applied Linguistics* 24, 2, pp. 223-242.

Nesselhauf, N. (2005), *Collocations in a Learner Corpus*, Amsterdam, John Benjamins.

Nesselhauf, N., Tschichold, C. (2002), 'Collocations in CALL: An Investigation of Vocabulary-Building Software for EFL', *Computer Assisted Language Learning* 15, 3, pp. 251-19.

Penadés, I. (2004), 'La enseñanza de la fraseología en el aula de E/LE', *Carabela* 56, pp. 51-67.

Polguère, A. (2000), 'Towards a Theoretically-Motivated General Public Dictionary of Semantic Derivations and Collocations for French', *Proceedings of the Ninth EURALEX International Congress*, volume II, Stuttgart, Universität Stuttgart, pp. 517-527.

Rogers, M., Ahmad, K. (1998), 'The Translator and The Dictionary: Beyond Words? in Atkins, B. T. S. (ed.) *Using dictionaries*, Tübingen, Niemeyer, pp. 193-204.

Ruiz, A. (2005), 'El uso del diccionario en la enseñanza y aprendizaje de las colocaciones en español' in Castillo, M. A. et al. (coord.), pp. 785-790.

Sala Cajal, L. (2004), 'Aliarse con Internet para aprender (sobre) el vocabulario', *Carabela* 56, pp. 121-143.

Selva, T., Verlinde, S., Binon, J. (2002), 'Le DAFLES, un nouveau dictionnaire électronique pour apprenants du français', in Braasch, A. and Povlsen, C. (eds.), *Proceedings of the Tenth EURALEX International Congress, EURALEX 2002*, volume I, Copenhague, CST, pp. 199-208.
Verlinde, S., Selva, T., Binon, J. (2003), 'Alfalex: un environment d'apprentissage du vocabulaire français en ligne, interactif et automatisé', *Romaneske* 28, 1, pp. 42-62.