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The lexical approach: collocability, fluency and implications for teaching

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ABSTRACT

The lexical approach identifies lexis as the basis of language and focuses on the principle that language consists of grammaticalised lexis. In second language acquisition, over the past few years, this approach has generated great interest as an alternative to traditional grammar-based teaching methods. From a psycholinguistic point of view, the lexical approach consists of the capacity of understanding and producing lexical phrases as non-analysed entities (chunks). A growing body of literature concerning spoken fluency is in favour of integrating automaticity and formulaic language units into classroom practice. In line with the latest theories on SLA, we recommend the inclusion of a language awareness component as an integral part of this approach. The purpose is to induce what Schmidt (1990) calls *noticing*, i.e., registering forms in the input so as to store them in memory. This paper, which is in keeping with the interuniversity Research Project *“Evidentiality in a multidisciplinary corpus of English research papers”* of the University of Las Palmas de Gran Canaria, provides a theoretical overview on the research of this approach taking into account both the methodological foundations on the subject and its pedagogical implications for SLA.

Key words: lexical approach, collocations, formulaic language, noticing, fluency.

1. Introduction

To date, lexis acquisition has been largely dependent upon the practice of other language skills. However, this has been shown to be insufficient in achieving an appropriate vocabulary expansion. The principles of the lexical approach have received interest since the publication of *The Lexical Syllabus* (David Willis, 1990) and *The Lexical Approach* (Michal Lewis, 1993). Since then, research on this matter has posted vocabulary at the centre of language teaching, because 'language consists of grammaticalised lexis, not lexicalised grammar'. The lexical approach is considered an alternative to grammar-based-approaches and has been defended by many authors who see lexis as a fulcrum of the communicative competence in the command of oral and written skills. One of the criticisms of the Lexical Approach is that it does not contain a detailed learning theory, although according to Lewis (1993) this does not mean a break with the *Communicative Approach*, but a development of it. He makes a practical summary of the findings from first language acquisition research that, he thinks, are relevant to second language learning:

- The acquisition of grammar is a process of observation, hypothesis and experiment.
- Language is not acquired by learning individual linguistic forms and then combining them, but by an increasing ability to break down wholes into parts.
- Whole phrases can be used without understanding their constituent parts.

Lewis' lexical approach concentrates students' improvement on lexis and word combinations. It focuses on the basis that language learning is directly associated with the capacity for comprehending and producing lexical phrases as unanalysed entities, or chunks, and that "these chunks become the raw data by which learners perceive patterns of language traditionally thought of as grammar" (Lewis, 1993, p. 95).

Willis (1990, p. 72), in rationalizing an argument for a lexical syllabus, notes that "learners do accumulate language forms, often phrases". He suggests that a lexical syllabus should be matched with an instructional methodology focused on language use. According to Moudraia (2001) Sinclair's (1987) and Willis's (1990) lexical syllabi are word based, but Lewis's lexical syllabus is specifically not word based, because:

[...] it explicitly recognises word patterns for (relatively) de-lexical words, collocational power for (relatively) semantically powerful words, and longer multi-word items, particularly institutionalised sentences, as requiring different, and parallel pedagogical treatment (Lewis, 1993:195 cited in Moudraia, 2001, p. 1).

Schmitt (2000) makes a valuable contribution to a learning theory for the Lexical Approach by affirming that the mind stores and processes these collocations or lexical chunks as individual wholes. Our mind can store large amounts of information in long-term memory, but it is much more limited in short term memory, for example when language is produced in speech. This means that it is much more efficient for the brain to recall a chunk of language as if it were one piece of information. "*Database management systems*" is, therefore, recalled as one piece of information rather than three (or four) separate words.

Moudraia (2001) also makes a distinction between vocabulary understood as individual words with fixed meanings and lexis that also includes the word combinations stored in our mental lexicons. Language in the lexical approach focuses on meaningful chunks that, when combined, generate coherent output, and only a minority of spoken language is freshly created.

In the same line of thought Moon (1997, p. 40) states that "words are again and again shown not to operate as independent and interchangeable parts of the lexicon, but as parts of a lexical system". Research has demonstrated that if learners understood how memory works, they might feel encouraged to acquire

vocabulary more effectively. On the one hand and in compliance with Wood (2001), we favour pedagogy of oral fluency, which integrates elements of automatization with collocation competence. On the other hand, as recent studies have proposed, the incorporation of some “attention” (“noticing”) to form can lead to improved performance in processing input and increased accuracy in production. We suggest instructional procedures that help learners turn “input” into “intake”.

Schmidt (1990, p. 149) introduces the concept of *intake* as a fundamental key in language acquisition:

Intake is what learners consciously notice. This requirement of noticing is meant to apply equally to all aspects of language (lexicon, phonology, grammatical form, pragmatics) and can be incorporated into many different theories of second language learning. Theories of parameter setting in L2, for example, can easily incorporate the suggestion that whenever *triggers* are required to set parameters, these must be consciously noticed.

2. Collocations and fluency

The organization of the L1 mental lexicon and the way words are stored and retrieved for processing and output have received considerable research. Our mental lexicon is efficient and highly organized where semantic related items are stored together. The most remarkable experiment done in this field has been word-association, in which a spontaneously generated word response to a prompt may be closely associated with that prompt word in the mental lexicon (Deignan et al., 1998). Likewise, “an analysis of these responses [to a prompt word/s] may give useful information about how words might be linked together in a person’s mind” (Aichison, 1996, p. 24). Wright (2001) quotes a word association experiment which found that nouns elicit nouns around 80 per cent of the time, whereas verbs and adjectives do so... just over 50 per cent of the time. This process can explain, for example, the extraordinary recurrence of noun strings, commonly known as “noun compounds” in scientific and technical discourse.

However, most studies in this psycholinguistic field have been carried out in first language acquisition. Firth (1951), who was thought to be the father of collocation, believed in the separation of Lexis and Semantics because he thought collocation

was the central part of a word's meaning. Collocation is the way in which words associate with one another and can be defined as word clusters, which are regularly used in spoken and written English. For Nattinger and DeCarrico (1992, p. 1), they are “multi-word phenomena that exist somewhere between the traditional poles of lexicon and syntax, conventionalized form/ function composites”. We agree with Wright (2001) on the fact that word association is not a simple matter of observable behaviour, but a complex process of what usually occurs in our minds from the very first moment we hear a word and produce another. This process involves intricate relationships of understanding, storage, retrieval and output.

Collocations or formulaic language units are also powerful and long lasting connections. Sinclair (1991) finds the connection between lexis and meaning according to syntagmatic (*chain*) as well as paradigmatic (*choice*) relations. He illustrates the idiom principle: “language is organised according to semi-preconstructed phrases that constitute single choices, that is, words do not occur at random in a text, even though they might appear to be analysable into segments” (1991, p. 110), e.g. the meaning of the phrasal verb *log out*, is not found by dividing and analysing its respective parts *log* and *out*, but rather in its full meaning as a phrase or chunk. Willis (1997) coined the groups of this kind as *lexical phrases*. The production of language, especially in real time, carries the stringing together of pre-packaged units or phrases. It seems that meaning and word class are also very closely connected, and as Aichison (1996, p. 109) claims “can be regarded as integrated into a single whole, the lemma”. This means that words of one part of speech may be tightly grouped together.

A growing body of literature on L2 acquisition, on the other hand, has shown that fluency is an observable aspect of speech that can be linked with cognitive processing and is frequently used to describe language performance. Fluency is featured by a great number of patterned or ritualised sequences. In fact, one of the most outstanding achievements in *Discourse Analysis* in the past few years has been the revelation that it is not the spontaneous activity that many authors had defended, but is governed by specific rules and principles that have been empirically demonstrated by *Corpus Linguistics* (cf. Nattinger and De Carrico, 1992, *inter alia*). Spoken fluency and lexical competence are united by a very powerful link which has made some researchers favour a pedagogy of second language fluency which integrates notions of automaticity and formulaic language units into classroom

practice. Such units are fundamental in understanding how oral fluency occurs in real-life discourse through interpersonal communication.

Bearing the above in mind, it is clear that spontaneous spoken language includes phrases that have been stored as entities. Miller and Weinert (1998, p. 394) affirm that they are not saying that “the entire set of spontaneous spoken utterances consists of prefabricated chunks... only that they contain a proportion of prefabricated chunks that ease the encoding and decoding load”. Fluency may be based on the combination of both prefabricated chunks and newly constructed stretches of language. These units help in both sentence construction and speed of speech. On this matter, Chambers (1998, p. 542) postulates:

These phrases... focus the attention of the listener while allowing the speaker time to formulate the utterance further. What appears to enable learners to produce longer speech units is the increasing use of automatised chunks or clusters of words combined with newly assembled strings of words. These productive lexical and syntactic phrases are of particular value to foreign language learners and can enhance their fluency by providing a frame to build a sentence as well as approaching the characteristics of native-like speech. Automatised repertoires of such chunks and clusters seem to be central to fluent speech. This knowledge can take us far in the direction of teaching fluency. (Cited in Wood, 2001, p. 578).

In consequence, it seems increasingly evident that the control of large numbers of formulaic language units and sentence stems improves fluency. Wood (2001) holds that a string or frame is needed which links to the concept or part of the concept to be expressed. These prefabricated pieces must be strung together according to the communicative situation. A great amount of speech can be expressed formulaically and, if they are automatised and pulled readily from memory, fluency is undoubtedly improved, because “it gives the speaker time to pay attention to the multitude of other tasks necessary while speaking, such as generating specific lexical items, planning the next unit of discourse, processing novel pieces syntactically, and so on” (Wood, 2001, p. 580).

In summary, collocability acquisition and spoken fluency have a high dependence on each other. Under our teaching experience, we coincide with Cortina (2009) in that collocations are both stored and retrieved in memory mechanically, possess a pragmatic function and are established by the context. These formulaic units become prefabricated chunks, which facilitate spoken fluency.

A variation of collocations also occurs in English for Science and Technology discourse, which causes difficulties in understanding and production for our university students. We are referring to the so-called *noun compounds* or *noun strings* which are composed of two or more nouns and, more seldom, adjectives that together form a single concept or idea.

At first sight, they do not involve problems of understanding, especially those composed of two or three elements, but long compounds can become obscure. Most of them are generally formed from prepositional phrases, relative clauses, or the combination of both, but others do not respond to any logical formation.

Newmark (1988) makes a classification of text typologies according to the functions of language of Jakobson (1959), and remarks that, within the informative function proper of the scientific and technical discourse, one of the main linguistic features at the expert level is the recurrence of "*multinoun compounds*".

However, it should be noted that those who use these kinds of nominalisations are scientists, not linguists, so there must be a reason for using this lexical characteristic so frequently. From the terminological perspective, a possible explanation is the proper characteristic of the scientific and technical discourse of condensing information, which means that the density of the use of noun compounds could establish the text classification according to the specialisation levels. Cartagena (1998) y Cabré (1993) agree on the relationship between their extension, syntactic stability and degree of specialisation.

Many of these collocations are used in an abbreviated form in the discourse and become very common in use: central processing unit, data processing department organisation, exception principle system, senior system analyst, data manipulation language, control transfer instruction...

Within teaching practice, the degree of difficulty in the interpretative process of these noun strings mostly depends on their length. After practising the composition of the short groups, we recommend the extension of the pedagogical practice and the introduction of more complex groups within a communicative approach. As an illustration, there is a classification of noun compounds according to their length and complexity to follow:

Simple:

Graphics tablet= a tablet which is used for drawing graphics.

Drum plotter= a plotter which has a drum.

Semicomplex:

Routine maintenance time= computer time assigned for performing routine maintenance work.

Memory buffer register= a special register through which all data entering or leaving memory must pass.

Tape bootstrap routine= a bootstrap routine present in the first block of a program tape.

Optical bar-code reader= a device which reads by optical means information which has been coded by making marks on documents.

Complex:

Return-to-reference recording= a system for recording information in magnetic cells, in which each cell can be magnetised to represent the binary digit 1 by applying energy to alter the condition of the cell with respect to some predetermined reference condition

Sequential-stacked job control= a control system which ensures that jobs are performed in the sequence in which they are presented to the system.

Film optical sensing device: a device which converts data recorded on film into a form acceptable to a computer by optical scanning of the film.

Cathode ray tube visual display unit= a visual display unit in which a cathode ray tube is used as a medium for the output of data for visual inspection.

Very complex:

Distributed data base management computer system= a computer system managing databases which are distributed.

Las Palmas university staff performance management policy document= the document which explains the policy for managing the performance of staff in the University of Las Palmas.

Split damper inertially coupled passive gravity gradient satellite attitude control system= a system for controlling the attitude of a satellite, this system operating with the following characteristics: it has a split damper and is coupled (joined) by inertia and has its gradient determined by allowing gravity to take control (with no effort to overcome gravity) (from Trimble, 1985, p. 133).

The last example is composed of eleven elements and we suggest that this is the longest of which we are aware. Therefore, we totally agree with Trimble (1985,

p. 135) who affirms, “*these are the type of compounds that technical writers should be discouraged to write, whatever the provocation*”.

Despite the difficulties of these very complex noun groups, which cause serious problems even for native users specialised in the subject, in the day to day classroom practice the simple and semi-complex noun strings do not pose problems for the students. But, it should be taken into account that when decomposing or translating them those that are very complex do not permit a lineal translation, that is, in the same order as they appear in English. This, naturally gives rise to problems in understanding, which shows that the students/users should have both a good command of noun compound formation and specialised subject knowledge.

3. Teaching implications

In line with the previous section, students must be aware that words “hunt in packs” (Thornbury, 1988, p. 8). To put it differently, all words have their own collocational field. The most common types are:

<i>verb + noun</i>	<i>adjective + noun</i>	<i>verb + adjective + noun</i>	<i>adverb + verb</i>	<i>adverb + adjective</i>	<i>adverb + adjective + noun</i>	<i>adjective + preposition</i>	<i>noun + noun...</i>
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McIntosh (1961) also referred to these lexical patterns collocations as *ranges*. He proved that words only had compatibility to a certain tolerance. But for L2 learners this can be quite complex. An example might be in classifying a term such as *applications software* into an extension of the range *computer hardware*.

Collocations must be acquired both through direct study and large amounts of quality input. Students usually have difficulties with lexical and grammatical relationships and, undoubtedly, the most common problems they face when trying to study collocations are in the areas of recognition, understanding and production, particularly in the cases of those complex and very complex units. However, classroom practice has shown that once grasped, the lexical approach can motivate learners’ interest and enthusiasm in the language.

Bearing in mind the latest second language learning theories, we suggest that for the *Lexical Approach* to be fully successful it must be combined with a *Language Awareness Approach*, which is the way learning materials and teachers can best help students achieve noticing of collocations. In this regard, Tomlinson (2003) points out that in a language awareness approach the principal objective is to help learners notice for themselves how language is typically used so that they will note the gaps and achieve learning readiness. Conscious processing is vital in the language learning process. Noticing can enhance a feature, so that it becomes more noticeable in future input contributing to the students' psychological readiness for the acquisition of that feature. Thus, noticing is a necessary condition for storage and as Schmidt (1990, p. 129) propounds "subliminal language learning is impossible, and *noticing* is the necessary and sufficient condition for converting input to intake".

For Lewis (2000), noticing collocations is a necessary but not sufficient condition for input to become intake. If students are not motivated to notice language in a text they may not succeed in achieving intake. This is also reaffirmed by Thornbury (1998) when adds that there is no acquisition without *noticing*.

In compliance with Ellis (1997), we propose that acquisition is enhanced through *consciousness raising*. The most useful role of the teacher in consciousness raising is to encourage noticing by providing students with strategies to use outside the classroom and familiarity with as much appropriate, quality language as possible. It is well known that students who have been taught the common collocates of words, since the first stages, use them far more naturally and have a better command of ready-made language, which contributes to fluency improvement.

In the context of our university level, both upper-intermediate and advanced learners should be encouraged to use activities highlighting collocations. Some advanced students often lack motivation due to the fact that they feel they know English grammar. They usually possess a good command of active vocabulary and do not see the necessity for acquiring more new items. Here the teacher's guidance is essential. If they only revise the same grammar points along with rarely-used lexis, it will probably result in a lack of interest. According to Lewis (2000) most students will in fact remain stuck on the intermediate plateau and tend to continue producing both spoken and written language containing unnatural-sounding elements.

Learners should be encouraged to seek an increasingly large amount of exposure to both written and spoken language outside the classroom, and *noticing collocations* within that material. Following Willis's thesis (1997), learners should be made to analyse the components of the clause- the verb group and the noun group, particularly postmodification in the latter which, in spite of a degree of difficulty, also affords a great deal of information. In fact, "noticing" collocability has a number of advantages (a) reduces learners' stress as it minimises the amount of planning and processing required within clauses when producing spoken language (b) promotes social interaction as it motivates learning (c) can be easily memorised because of its contextualisation and (d) can become models for future analysis.

In the pedagogical practice, it should be noted that the way students learn and store vocabulary can also affect their success or failure in retrieving it when needed. As formulaic language units can themselves be stored as automatised units in memory, learning these new items involves storing them first in our short-term memory prior to transferring to long-term memory. Although this is not consciously controlled some important points must be taken into account. First, unlike long-term memory that can hold any amount of information, in short-term memory the retention process may not be effective if the number of constituents exceeds seven. In consequence, this suggests that teachers should avoid attempting more than this number in class. Another point that affects storage is word frequency as the easiest items to *notice* and retrieve are those more frequently used. This information facilitates the acquisition process by grouping items of vocabulary in semantic fields. Wray (2002) is in favour of the automatic repetition of these units for their acquisition and argues that the storage of these sequences is produced holistically, as if they were single units. This process facilitates acquisition because, as was detailed above, learners do not need to analyse morphologically or syntactically such units for comprehension.

We agree with Cortina (2009) on her recommendation of three graded steps in the process of acquiring formulaic sequences: automatised, contextualisation and production. The first is related to guided activities, while the second and third are related to semi-guided and free production activities. This pedagogical approach allows learners to work independently during the first two steps, whilst the teacher can indulge the practice of oral skills.

Learners can be motivated to use a variety of methods using topics and categories for organisation. Moras (2001), in her attempt to provide meaningful

tasks which promote noticing, proposes diagrams and word trees that can be used within topic/category organisations.

Among consciousness raising activities, meaningful tasks, such as dictogloss, seem to be the best option for lexis acquisition. We recommend dictogloss of texts containing collocations, as it is the bridge to afford automatisisation. These tasks encourage students to analyse and process language more deeply, which facilitates both the learning and retention of information in long-term memory. The incorporation of the items learned in the students' active vocabulary seems to be the best answer for recycling too, here meaning should be stored using the second language as much as possible.

In the acquisition of lexical competence centred on fluency, automatisisation and attention to formulaic language units are fundamental elements. Inferential skills are also very valuable in reading comprehension courses through encouraging students to deduce meaning of words or terms within a contextual approach. We suggest that there is also an inherent creative and motivational element involved.

The tasks should be selected to allow the input to become intake and thus, to produce automatic retrieval. Some recommendations to develop collocations in the classroom are given below:

Handling with general and specific dictionaries and other reference tools.
Making vocabulary learning enjoyable and stimulating.
Guessing the meaning of lexical items from context.
Using real situations in simulations.
Working in groups: helps learning independence and exchange knowledge.
Practising rhetorical functions.
Noticing collocations and language patterns.
Recycling and repetition of tasks.
Intensive, extensive reading and listening.
Working with language corpuses.
A variety of word association games and exercises using the diverse techniques of cloze procedure.
Further hints through underlining.

Below, we also present a number of consciousness raising tasks centred on the pedagogical practice of noun compounds. We have found it appropriate to maintain their original headings:

Matching and definition

a. Define a number of noun compounds according to the examples provided:

Study these examples:

graphics tablet= a tablet which is used for drawing graphics.

bar code= a code which is made up of printed bars.

drum plotter= a plotter which has a drum.

Now, try to define each of these terms in the same way:

storage device flatbed plotter laser printer

colour monitor impact printer daisywheel printer

disc drive line printer voice recognition device

b. Choose the correct definition for the multi-word noun compound:

1. Optical character recognition input

- a. the input of characters through optical recognition
- b. the recognition of characters through optical input

2. Basic telecommunication access method

- a. basic method for telecommunication access
- b. access method for basic telecommunications

3. Cathode ray tube display unit

- a. a unit that displays a cathode ray tube
- b. a display unit which uses a cathode ray tube

c. Building compounds

Preparation: the teacher must collect enough pieces of text (scientific papers, instruction manuals, specialised newspapers and magazines...) to be able to give at least half of one to each student. A page or two is not enough for this exercise.

In class: Pick out noun-noun combinations where at least one item is new to you, or else their juxtaposition is. Find six such combinations and be prepared to teach their meanings to the rest of the class. This may well mean bringing in the context in which you found them. Teach your collocations clearly and briefly.

In the next class:

1. The board is divided into eight columns and a student is invited to put one of his/ her combinations in the first two columns and to teach it to the class. Then the group is asked to produce other nouns that combine well with the first noun. Suppose a student volunteers a combination such as “system chart”. The result may be:

Qualifying noun	Head noun	Head noun	Head noun	Head noun	Head noun	Head noun	Head noun
System	chart	communi- cation	design	analysis	failure	generation	control language
Address	bus	Format	mapping	calculation sorting	modifica- tion	range register	control field

2. Different students are invited to volunteer to teach one of their six combinations until the board is full.

d. Decoding compounds: rewriting:

The aim of this activity is to decompose noun compounds or to construct them from a decomposed text, understanding the relationships between their elements. The following are examples:

TOWARDS A STANDARD INFORMATION RESOURCE DICTIONARY SYSTEM

Since 2007 an American National Standards Institute Technical Committee has been developing a software package standard called an information resource dictionary system (IRDS). This committee, known as ANSI/X3H4, plans to produce a draft proposed American national standards (DPANS) for the IRDS software specifications. The IRDS can be viewed as a specialised database management system which has the capabilities to document an

enterprise's information environment to maintain an inventory of all information entities.

TOWARDS A STANDARD SYSTEM BASED ON A DICTIONARY CONTAINING A RESOURCE OF INFORMATION (INFORMATION AS A RESOURCE)

Since 2007 “a Technical Committee of the American National Standards Institute (an American Institute which is national and sets standards)” has been developing “a standard for a package of software” called “a system based on a dictionary containing a resource of information”. This committee, known as ANSI/X3H4, plans to produce “an American standard that is national which has been proposed in a draft” for “the specifications of the IRDS software”. The IRDS can be viewed as “a specialised system for the management of a database” which has the capabilities to document “the environment of information in an enterprise” to maintain an inventory of “all the entities containing information”.

4. Conclusion

This paper has offered a general insight into the methodological foundations of the Lexical Approach and its implications in formal teaching situations. As recent L2 research indicates, learning collocations, apart from increasing the mental lexicon, leads to an increase in written and spoken fluency. Following Lewis's words (2000, p. 15) “fluency is based on the acquisition of a large store of fixed or semi-fixed prefabricated items, which are available as the foundation for any linguistic novelty or creativity”. Thus, an understanding of collocation is essential for all learners, especially for those on upper-intermediate and advanced level courses for the active improvement of oral output within and outside classroom practice.

In the pedagogical practice, we propose the inclusion of the theory of “noticing” in order to improve both performance in processing input and higher accuracy in production. For that purpose, we have made some recommendations for classroom practice, as well as illustrations of tasks oriented to one of the most important lexical problems in EST discourse: the so-called Noun Compounds.

The growing relationship between lexis and noticing combined with the importance of formulaic language in communication could unquestionably open up new ways to develop 1) further pedagogical techniques to promote fluency, and 2) new course designs to help learners raise their understanding of the combinations of words, as well as the lexical nature of language.

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