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The Use of Componential Analysis to "Deepen" L2 Students' Lexical Competence

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1. INTRODUCTION

It is a platitude to say today that lexis is at the heart of language acquisition. As Wilkins suggested, "without grammar very little can be conveyed, without lexis nothing can be conveyed" (1972:111). However, and despite current efforts to introduce lexical perspective in the language syllabus, many advanced English students at the University of Granada (Spain) lack adequate lexical competence (Pérez Basanta 2005).

The question which may arise at this point is "what is meant by being lexically competent?". Many authors have turned their attention to this issue. The most well-known article is Richards' 'The Role of Vocabulary Teaching' (1976) in which the author describes different aspects involved in the assumption "what is to know a word". This seminal paper asserts that the construct of vocabulary is characterized by its multiple dimensions. However, some linguists involved in the area of language testing (Meara 1996), have criticized his excessive, and thus, impractical multiplicity. Therefore, most authors at least identify two different traits in the concept of vocabulary: breath and depth (Harley 1995; Meara 1996; Read 1988, 1993; Wesche & Paribakht 1996). The former implies lexical size, i.e., the number of lexical items. The later, on the other hand, consists of the quality of the learner's knowledge of a word, i.e., "a word's different sense relations to other words in the lexicon, e.g., paradigmatic […] and syntagmatic" (Haastrup & Henriksen 2000: 222). Following from this definition, the interconnection between depth of lexical knowledge and semantic knowledge should be clearly acknowledged. For instance, Channell affirms that lack of semantic concern in vocabulary teaching would result in "a flat, uninteresting style, and failure to express the variety of ideas [the learner] wants to communicate" (1981:115). Furthermore, from a psycholinguistic stand, words are longer retained when deeper

processing and interaction with previous schemata take place (Craick & Tulving 1975; Mezynski 1983; McKeown, Beck, Omanson & Pople 1985). Additionally, Aitchison (1994) states that students first map meaning into form, whereas accuracy would be achieved much later. As Henriksen (1999) suggests, there is enough evidence to believe that the acquisition of a good lexical competence involves both kinds of knowledge on a continuum: "precision will come later and lexical development can be characterized as a move or progression from rough categorization or vagueness to more precision and mastery of finer shades of meaning (Henriksen 1999: 311)."

Then, coming back to our previous concern, teachers must work both on quantity and quality to improve learners' lexical competence. Consequently, they should devote their efforts to teach semantic aspects of vocabulary at advanced levels, otherwise students' speech might sound childish and inadequate (Jullian 2000).

Conscious of the importance of enhancing semantics at higher levels, this paper proposes the use of componential analysis to increase students' awareness of different shades of meaning (Gairns & Redman 1986). First, it will briefly review componential analysis theory, as well as its criticisms and possible applications. Then, with the help of the *Longman Language Activator* dictionary, it will describe and illustrate the design of componential analysis activities in the semantic field of *travel*, which have been carried out with university students (Univ. of Granada). We should note that these activities are part of a wider lexical online project entitled *ADELEX: Assessing and Developing Lexis through the Internet*[1]. Consequently the activities proposed in this paper would also take advantage of the virtual environment. Finally, the paper draws some conclusions and encourages language teachers to implement componential analysis in their teaching scenarios.

2. COMPONENTIAL ANALISIS AND ITS UNDERPINNINGS

Componential Analysis (henceforth CA) stems from Trubetzkoy and The Prague School's studies (Cerdá, 1983). They firmly believed that "words are not the smallest semantic units but are built up of smaller components of meaning which are combined differently (or lexicalised) to form different words" (Saeed 2000: 231).

One of the most relevant studies is the one carried out by Katz and Fodor (1963). They basically defend two main ideas: a) semantic rules should be repetitive; and b) meaning is neither arbitrary nor unitary, but componential (Saeed 2000). As a corollary, "the lexicon and the

structure of the sentence compose to form meaning" (Jaszczolt 2005: 70). In other words, meaning is compounded of minimum semantic unities called semantic features, which are combined to form the complete meaning of a word[2]. Those features can be classified in two different sets (Hatch & Brown 1995):

- *Markers* are limited in number and have grammatical consequences. For example, if we decompose a word such as "house", it will carry the feature (- animate) as a consequence of being inanimate. We should, then, be careful in choosing an active voice for its verb, as a sentence like "* the house is selling" would be incorrect. Therefore, grammatical restrictions are found in that kind of semantic features.
- *Distinguishers*, on the other hand, are more abundant and, contrary to the previous features, lack of grammatical implications because they are exclusively related to meaning. Thus, a distinguisher of "house" may be [+ roof] or [- wheels].

However, this descriptive system, fully developed in the *Katzian dictionary* (Carter & McCarthy 1988), has been frequently disapproved.

Criticisms

Katz and Fodor's theories have been the focus of much controversy. Hatch and Brown (1995) remind us that although distinguishers are those with the strongest meaning charge, they have hardly been studied. Therefore, there are not enough examples to put forward a theory from current data (Jeffries 1998). In the same vein, Saeed (2000) criticises lack of systematicity in the labelling of the different features, a process which would depend on each person's perception of reality. According to Goddard, supporters of CA should "standardise the inventory of semantic features or to constrain its size" (1998: 50). In addition, Bolinger (1965) stresses the wrong binary treatment of semantic features (+/-) as sometimes a gradation would be more suitable. Aware of these problems, Nida (1975) proposes a system whose components were multi-valued features, i.e., a scale from + to -, when it was required by the meaning.

This dearth of consensus leads Wierzbicka (1972, 1996) to the formulation of an alternative theory to CA: semantic primitives, which consist of a group of semantic features with such basic meanings that they do not allow further analysis, thus, becoming the embryonic stage for generating more complex meanings. Wierzbicka, after analysing

several languages, concluded that semantic primitives were universal as they were found in all languages because of their elemental nature.

Applications

These criticisms suggest that there is a long way to go before we can claim well-established theories in this area. On the other hand, existing studies have been more concerned with theoretical issues than with finding possible applications. In particular, we consider that one of the most fruitful discussions on CA might be its implementation in the language classroom. It seems that the use of semantic features might become a clear display for exemplifying the meaning of similar words, for instance. Therefore, and despite criticisms previously pointed out, CA would guide "students to an awareness of and an appreciation for the uniqueness of each word" (Pittelman, Heimlich, Berglund & French 1991: 1). What seems obvious to us is that teaching some set of words according to CA insights may help students to make their vocabulary more colourful, varied and precise in the long run (Jullian 2000). However, we strongly believe that CA has been disregarded among the language learning milieu. Thus, this paper attempts to provide teachers with examples and practical guidelines for the implementation of CA theories in the L2 classroom.

3. Our Proposal: The Use of CA Grids to Improve Students' Lexical Competence

As aforementioned, this proposal is part of a virtual course (*ADELEX)*, whose main objective is to improve students' lexical competence through a wide range of activities on various topics. Divided into different modules, *ADELEX* contents try to cover all aspects of vocabulary knowledge. In particular, *module 8* deals with semantic aspects of lexis within the topic area of *tourism*, which embraces, at the same time, different semantic fields inspired by the 'Threshold Level' catalogue (Van Ek 1975). As a result, some of the semantic fields included in our module of tourism are *travel*, *spare time* and *places* among others. Taking on board CA theory and Gairns and Redman's words: "If we take items from the same semantic field […] we can, by breaking them down into their constituent parts, examine the similarities and differences between them" (1986: 40), we believe that CA grids would be a useful activity to make students aware of the subtleties of word, thus contributing significantly to the improvement of students' depth of lexical knowledge.

Therefore, the proposal presented in this paper describes the processes involved in implementing CA activities within the semantic field of *travel* in *ADELEX* project. In what follows, we will first concentrate on the selection of lexical items. Second, we will spell out some considerations as to how to decompose word meanings. Finally, we will illustrate this approach with some activities designed for *ADELEX*'s module 8.

Selection and organisation of vocabulary: longman language activator

Longman Language Activator (henceforth *LLA*) is an extremely useful dictionary targeted to intermediate students of English and above. As its introduction remarks, "one of the most important innovations in this book is the grouping together of individual word-meanings or phrase-meanings that generally share the same idea, concept, or semantic area" (*LLA*, 1993/1995: F8).

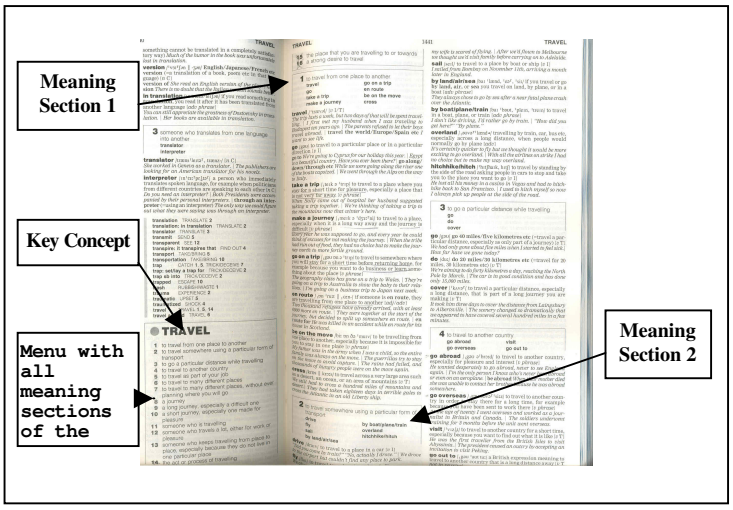

Fig. 1. *An illustration of the key concept travel in the Longman Language Activator (1993/1995:1440-1)*[3]

As observed in Fig. 1, *LLA* offers an easy-to-manage structure: first, dictionary entries consist of *key concepts* which are alphabetically ordered. Second, each of these entries includes a choice of *meaning sections* under which words are grouped. At the same time, meaning

sections of an entry are displayed all together on a menu just below the key concept so that readers can easily select the meaning they are looking for. In addition, *LLA* is based on rigorous statistical studies from different corpora, collectively known as the Longman Corpus Network[4]. In sum, we consider that its semantic indexer and its corpus-based methods are enough guarantees to account for its reliability and validity and thus, to choose *LLA* as source for our CA approach.

Therefore, we started analysing the *LLA* key concept of *travel* (1993/1995: 1440-4) to select the words we were to include in our CA grids. We found a menu of 16 "meaning sections" (see Fig. 1). Out of these sixteen, we discarded six of them (no. 2, 3, 14, 15 and 16) as university students are supposedly acquainted with lexical items such as: *drive*, *fly*, *sail*, *by plane*, *go*, *travel* or *destination*). Furthermore, we unified sections 8, 9 and 10 under the same "meaning section" because the three of them referred to types of journeys. We then proceeded likewise with sections no.11, 12 and 13 as they all were related to different kinds of travellers. In the end, we came out with 7 different "meaning sections" under the key concept *travel* (Table 1).

Table 1. *Organisation of the words selected from the LLA and their respective "meaning sections"*

KEY CONCEPT	MEANING SECTIONS	WORDS INCLUDED
Travel (from *LLA*)	1. To travel from one place to another	Travel, go, take a trip, make a journey, go on a trip, en route, be on the move, cross
	2. To travel to another country	Go abroad, go overseas, visit, go out to
	3. To travel as part of your job	Travel, commute, tour, be on tour
	4. To travel to many different places	Travel around/round, tour, do, get around/round, explore, see the world, on your travels
	5. To travel to many different places, without ever planning where you will go	Drift, wander around, bum around/round, swan around/round
	6. Types of journeys	Journey, trip, flight, voyage, crossing, drive, ride, tour, expedition, trek, outing, day trip, excursion
	7. Types of travellers	Traveller, globetrotter, we-travelled, travelling, itinerant, migrant, nomad, drifter, vagrant, itinerant

This table shows the meaning sections which we would subsequently be concerned with for the implementation of CA in our module. This classification is vital, since each CA grid would focus exclusively on one meaning section. The next task would be to decompose the meaning of the words included in each of the above detailed "meaning sections".

Decomposition of word meanings

Before getting into the description of this step in *ADELEX*, and being aware that the process of meaning decomposition is one of the most controversial aspects in CA – for being considered a subjective process (Saeed 2000), – we established some practical guidelines in an attempt to make this procedure as analytic and as systematic as possible:

1. Bearing in mind that semantic features entail different types of information, three *classes of features* can be distinguished: a) *meaning features* (Katz & Fodor's *distinguishers*), b) *grammatical features* (Katz & Fodor's *makers*), and c) *collocational features* (some words differ from others because of the company they keep). As these three features may indistinctly appear along CA charts, we highly recommend that teachers, or whoever is interested in using CA grids, establish a marking code to clearly distinguish the three of them – students should also be aware of this code.
2. In relation to the *grid completion*, it may be accomplished in three different ways: a) a *two-choice* system, for instance, by using *yes* or *no*, or +/-, or any other symbol which implies that the word possesses or lack a given feature; b) a *three-choice* system, i.e., adding to the binary display a third option whenever a certain feature is not applicable to a particular word meaning, possibly because too many words are included in the same grid (an example will be offer below); c) a *gradation:* word meanings do not always have a binary character, on the contrary, they can sometimes be located on a cline; for example, Pittelman et al. (1991) have noted that in the case of defining "different shelters" the use of a numerical scale from 1 to 5 would allow students to rank similar words according to a given feature. All in all, teachers should decide which of these three systems is more suitable for the words they are working in accordance with the particular word features which make up meaning.
3. Finally, some recommendations should be made regarding the *labelling process*[5]. Basically features should be precise and clear. In

this respect, we suggest the use of noun phrases instead of full sentences (e.g.: choosing "by plane" rather than "we travel by plane"). Similarly, we highly recommend the avoidance of: a) negations ("unhappy" better than "not happy"), b) repetitions of features (if we use "happy" in a binary or tertiary system, then it is not necessary to give the feature "unhappy" as the negation of the former would imply the affirmation of the later), and c) confusing words such as those with unclear polysemic meanings (e.g. "in a bank" may befuddle learners). In sum, features should be written in clear expository phrases so that learners can easily grasp their subtleties of meaning.

These brief guidelines have been developed as a result of decomposing word meanings for producing CA grids in *ADELEX*. Due to space constraints, we will only focus on section number 6, "types of journeys" (Fig. 1). After analysing definitions of this section meaning from *LLA* and in view of the issues previously discussed, we came out with the following feature grid:

	Act of traveling	**To a far away place**	**Planned**	**For a long time**	**Coming back**	**By plane**	**By boat or ship**	**In a vehicle**	**On a bicycle or horse**	**On foot**	**By an important person or team**	**To visit places of interest**	**Implies adventure**	**For pleasure**	**By a group**	**Just for one day**	**While on holidays**	**COUNTABLE NOUN**	**Business +**	**School/church +**	**15 minutes/12 hours +**
Journey	+	+	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	+	-	-	+
Trip	+	x	+	-	+	x	x	x	x	x	x	x	x	x	x	x	x	+	+	+	-
Flight	+	x	x	x	x	+	-	-	-	-	x	x	x	x	x	x	x	+	-	-	+
Voyage	+	+	x	+	x	-	+	-	-	-	x	x	x	x	x	x	x	+	-	-	-
Crossing	+	-	x	-	+	-	+	-	-	-	x	x	x	x	x	x	x	+	-	-	-
Drive	+	x	x	x	x	-	-	+	-	-	x	x	x	x	x	x	x	-	-	-	+
Ride	+	x	x	x	x	-	-	+	+	-	x	x	x	x	x	x	x	+	-	-	-
Tour	+	-	+	-	x	x	x	x	x	x	+	+	x	x	+	x	x	+	-	-	-
Expedition	+	x	+	x	x	+	+	+	+	+	x	x	+	x	+	-	x	+	-	-	-
Trek	+	x	+	+	x	-	-	-	-	+	x	x	+	-	+	-	x	+	-	-	-
Outing	+	-		-	x	x	x	x	x	x	x	+	x	+	+	-	-	+	-	+	-
Daytrip	+	-		-	x	x	x	x	x	x	x	+	x	+	+	+	-	+	-	-	-
Excursion	+	-		-	x	x	x	x	x	x	x	+	x	+	+	-	+	+	-	-	-

Fig. 2. *Final CA grid after decomposing word meanings into diverse features*

But lets us briefly analyze some key issues in the design of this chart (Fig.2):

- A tertiary system was the most suitable for the words we were dealing with as they required expressing "possession" or "absence of". However, having so many words in the same grid implied that some features were not applicable to some words, e.g. the feature "while on holidays" is not relevant to define the meaning of *flight*; as a result, we decided that students would use three different symbols to fulfil the grids: "+" to express possession, "-"for absence, and "x" not applicable to a certain word.
- We found three types of features in our example, and we designed a marking code to reflect it: First, meaning features, i.e., those expressing the actual meaning of words, would appear in *lower case*. In our example most features belonged to this category. Second, those implying a certain grammatical behaviour would be written in *upper case*. This group was not abundant in our example as they were all nouns. However, it would be useful for students to know whether nouns were COUNTABLE or UNCOUNTABLE. Finally, collocations would be identified with a "+" sign before or after the feature. In our particular example, there were "business+" or "school/church+" among others.
- In relation to a proper style for the feature labelling, we avoided repetition by only using "for a long time", for example, as its negation implies "for a short time". Moreover, they were all phrases so that they could be easily understood by the learners.

When all the aspects have been taken into account and semantic features have been properly selected, teachers only have to design their corresponding charts and CA activities would be ready for students to be completed. Although we are fully aware that this coding scheme may seem at first hand confusing and complex, it has been our experience that students quickly manage the code, thus becoming a powerful tool for understanding the subtleties involved in word meaning. Finally, we would like to illustrate with some of the CA grids used in *ADELEX* (Fig.3 & 4).

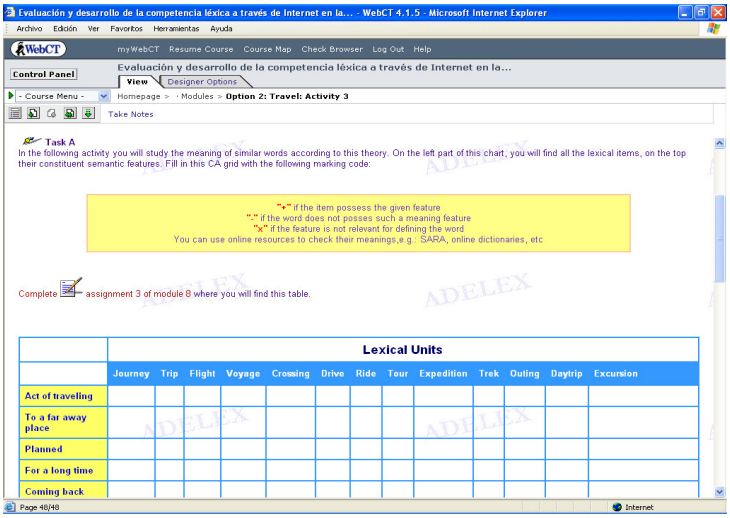

Fig. 3. *CA activity to be completed using a three-choice system with words related to different types of trips*

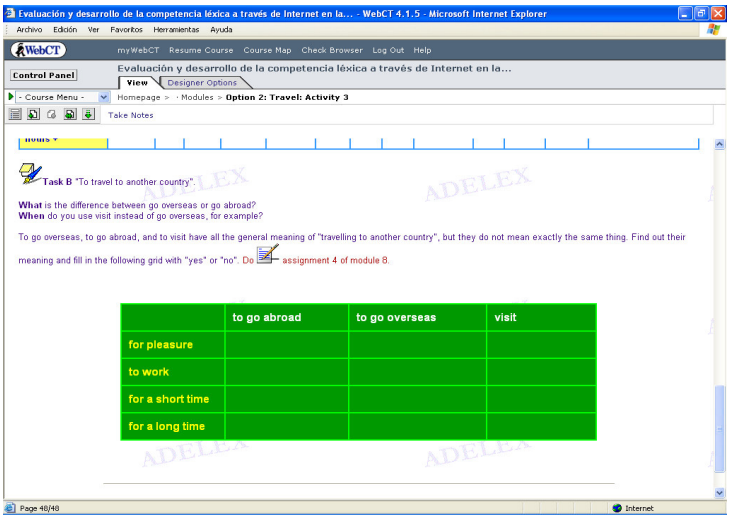

Fig. 4. *CA activity to be completed using a two-choice system with words related to "travelling to another country"*

4. CONCLUSIONS

We have seen in this paper that CA may be used to enrich ESL students' lexical competence, particularly "depth of knowledge". We have first pointed out some theoretical considerations so as to provide teachers with the rationale for implementing CA. Then, we have attempted to explain the procedures taken for the application of this proposal, which has been divided in two steps: a) selection of vocabulary items by means of *Longman Language Activator Dictionary*; and b) decomposition of meaning. Finally, we have presented some of the CA activities designed for the online environment of *ADELEX*.

In sum, and despite criticism from some scholars, we remain convinced that CA offers a practical framework for applied linguistics, teachers and writers of materials as a tool for increasing students' awareness of the complex shades of word meaning, and as a result it might certainly enrich lexical knowledge. As a final point, I have to mention that research carried out among our *ADELEX* students proved an immediate beneficial impact on their vocabulary but a review of this empirical study goes beyond the scope of this paper.

NOTES

1. For more information, read Pérez Basanta (2004)
2. For more detailed information about semantic features, see Nida (1975) and Leech (1981)
3. Reproduced by permission of Pearson/Longman Spain
4. More information on http://www.longman.com/dictionaries/corpus/lccont.html
5. Labelling process refers to the practice of giving a name to each of the different semantic features in which a word meaning is decomposed.

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