

On Arab EFL Learners' Use of Collocational Information in Electronic Dictionaries*

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Abstract

Although research about the use of collocations is growing, there seems to be no single study, to the best of my knowledge, which addresses how electronic dictionaries impact users' collocational thresholds. This empirical study has been carried out to bridge this gap in the research literature and assess the collocational competence of Arabic-speaking learners of English. The main focus is on their ability to judge the acceptability of verb-noun collocations using electronic dictionaries on CD-ROMs which are claimed to be much more than an 'ordinary' reference work.

The study meets a three-fold purpose and tackles the following issues: (a) how well can Arab learners judge verb-noun collocations, and more specifically whether they fare better with 'real' rather than 'pseudo-collocations'? (b) do dictionaries on CD-ROMs serve as satisfactory references to help judge verb-noun expressions? and (c) how do Arab learners handle collocational aspects in the dictionary?

A 20-item test revealed that students possessed poor collocational knowledge; the scores on the pretest showed that their collocational knowledge was below average and those on the main test were again, as expected, so low that we could not claim that dictionaries were really helpful. It is suggested that changes in content and design be brought in order to make dictionaries more effective and beneficial to their users. Furthermore, dictionary users are still in dire need to acquire special skills to derive full benefit from the information EFL dictionaries on CD-ROMs contain.

*The author sincerely thanks Dr. Bogaards, Editor IJL, for his insightful comments on an earlier version of this paper.

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“You shall know a word by the company it keeps”
Firth (1957)

1. Introduction

Not surprisingly, the lexical component of the English language was a neglected aspect during the seventies and eighties (Meara, 1980 and Zimmerman, 1997), but the last twenty years or so have witnessed a growing concern with lexis including ‘prefabricated chunks’, i.e. collocations (the term here refers to the phenomenon and each of its instantiation). One reason for this widespread concern is the frequency of such chunks in the language (cf. Jaén, 2007). The focus of researchers (e.g. Dechert and Lennon, 1989; Biskup, 1992; Bahns, 1993; Bahns and Eldaw, 1993; Hill, 1999; Shei and Helen, 2000; William, 2000; Nesselhauf, 2003 and Taiwo, 2004) was disambiguation, language generation systems, EFL learners’ acquisition and use of collocations as well as the relationship between knowledge of lexical collocations and speaking proficiency. The use of collocations in translation and in constructing a bilingual collocational lexicon was the concern of many other researchers (e.g. Heliel, 1989; Biskup, 1992; Ghazala, 1993a & 1993b; Abu Ssaydeh 1995 & 2001; Bahumaid, 2006 and Al-Jabr, 2008).

Siyanova and Schmitt (2008) as well as other scholars (e.g. Sinclair, 1991; Cowie, 1998 and Wray, 2002) point out that the appropriate use of collocations is regarded by most EFL teachers as a prerequisite for proficient language use. However, there is a widely held notion that collocations have frequently been problematic for non-natives, especially in production contexts (Iqbal, 1987; Hussein, 1990; Van der Wouden, 1992; Bahns and Eldaw, 1993; Granger, 1998; Howarth, 1998; Nesselhauf, 2003 and Jaén, 2007). Collocational differences between languages are problematic even for advanced learners (Brown, 1974) because learners stumble over which words go together (cf. Hüttner 2005 and Vrbinc, 2005). In most cases the collocates of a certain word are just unpredictable; learners either use their intuition or they resort to dictionaries. It was suggested that learner’s dictionaries had to include a greater number of collocations to cater for users’ needs (Benson, 1985a & 1985b). Earlier editions of learners' dictionaries seemed not to provide

users with enough insights into collocation (Singh, 1988 and Ter-Minasova, 1992).

Nowadays, dictionary-makers claim that electronic dictionaries (EDs) contain a wealth of collocational information. Publishers use intriguing phrases when they advertise their EDs such as 'revolutionise your language' or 'a revolutionary product', 'easy to use', etc. but unfortunately there has been a paucity of data on the role of electronic dictionaries in language learning or acquisition. However, some teachers have expressed fears that ease and speed of locating information in an ED may not help learners retain what they retrieved (Sharpe, 1995). By contrast, other researchers, e.g. Guillot and Kenning (1994) found that EDs enhanced users' acquisition of new items.

Mindful of users' complaints, the criticism teachers make of dictionaries and the adverse results obtained from previous research, this study examines the helpfulness of EFL dictionaries on CDs in judging verb-noun (VN) collocations. In addition, it aims at providing an insight into the way EFL learners handle collocational information. But before embarking on the present study, it is convenient to set the scene by explaining what is meant by collocation and examining the way EFL dictionaries on CDs treat these chunks.

2. What is Collocation?

Several linguists and lexicographers (e.g. Martin et al., 1983; Cop 1990; Nattinger and Decarrico 1992; Bahns 1993 and Hill, 2000) have suggested diverse definitions of collocation but according to Smadja (1993) each reflects a different perspective. Briefly put, collocation is basically the co-occurrence of two, or more, lexical items within a specified 'co-text' recurring significantly more frequently than by chance. Collocation falls along a continuum between idioms and free combinations (Benson et al., 1997 and McKeown and Radev, 1999) and its meaning is frequently readily deducible from its particular components.

A collocation usually consists of a *node* and a *collocate*. Jones and Sinclair (1974:16) point out that whereas the *node* is the lexeme “whose total pattern of co-occurrence with other words is under examination”, the *collocate* is the item “which goes with the node within a specified environment”. Collocability, according to Aisenstadt (1979) and Cowie (1984), may be **loose**, e.g. confirm mastery where any near synonym such as ‘command’, ‘authority’, etc. can replace ‘mastery’ or **obligatory**, e.g. pick a fight where near synonyms such as ‘quarrel’ and ‘argument’ cannot replace ‘fight’.

3. Collocations in EFL Electronic Dictionaries

Collocations received an equally considerable attention from EFL teachers and lexicographers (e.g. Cowie, 1978; Rudzka et. al, 1981 and 1985; Alexander, 1984; Benson, 1985c, 1989a & 1990; Benson and Benson, 1988; Cop, 1990; Sinclair, 1991; Ter-Minasova, 1992; Brown, 1994 and Chi et al, 1994). Compilers of electronic dictionaries have responded to this attention by increasing the number of collocations particularly because space restriction, which used to deter lexicographers from producing ideal definitions (Landau, 1984), is no longer a hurdle. Anyone who browses through the latest editions of EFL dictionaries on CD-ROMs will notice that these tools have introduced many new collocations and more collocation selection restriction information taken from the available corpora.

Walker (2009) argues that three of the learner’s dictionaries viz Collins Cobuild English Dictionary (*CCED*), Longman Dictionary of Contemporary English (*LDOCE*) and Oxford Advanced Learner’s Dictionary (*OALD*) present different types of ‘collocational pairings’ ranging from the relatively ‘unrestricted’ combinations to the more ‘fixed’ sequences to illustrate some senses of the defined words. It goes without saying that dictionaries vary as to the number and type of collocates included to exemplify definitions. Scanning the major EFL EDs (excluding *LDOCE*), one notices that many of the collocates of the defined words are still missing. In attempting to verify some VN collocations (e.g. perform measurement) before teaching these to my EFL learners, I have found that about one-third of them were missing from

OALD on CD-ROM and *CALD* on CD-ROM. Naturally, the inclusion of the rest varied from one dictionary to another (cf. Walker, 2009).

Possibly, lexicographers think that some collocations would be acquired unconsciously or they may have considered them too rare to include. Not only are some collocations absent but also learners' dictionaries do not present enough information to make users aware of the restrictions on the collocational aspects. The absence of such information may encourage users to make false generalisations and consequently use the wrong verb with a certain noun.

A major recurring problem facing lexicographers has been the placement of collocations in dictionaries. There is no straightforward rule which indicates where the *collocates* of a certain *node* can be found. One wonders, for instance, why *CALD* presents 'draw strength', 'swear allegiance' and 'exercise restraint' under the noun, while 'grab the opportunity', 'nose a car' and 'proclaim loyalty' at the entries for the verbs. Interestingly, 'draw comfort' is included under both elements. McKeown and Radev (1999) rightly ascribed this to the lack of an adequate definition of collocation. Another reason might be that some dictionaries had not adopted a systematic approach to entering collocations. Some researchers found that Cambridge International Dictionary of English (*CIDE*), *LDOCE* and *OALD* had employed a more 'systematic' approach to collocations than *CCED* (Mittmann, 1999 and Walker, 2009).

Hausmann (1985) suggested an appropriate approach to the placement of VN collocations. He considered a VN collocation such as 'adopt an approach' to consist of a *base*, i.e. 'approach' and a *collocator*, i.e. 'adopt', which is restricted by the base. Hausmann demonstrated that in dictionaries designed for decoding, collocations should be placed at the entries for the *collocators* but in dictionaries written to help users encode, i.e. learners' dictionaries, collocations should be entered at the entry for the *base*. This suggestion sounds sensible and feasible because dictionary users look for the verb to use when they do what they need to do to a noun (Leed and Nakhimovsky, 1990 and Oxford Collocations Dictionary). The results from previous research appeared to bear out this

argument; the 'verb' in a VN collocation appeared to be the cause of the trouble (Nesselhauf, 2003). Therefore, it sounds sensible to give examples about the VN collocations at the entry for the noun.

A more practical solution was to provide a 'noun index' so users could find under which verb entry a noun appeared (Wallace, 1982 and Benson, 1989b). I firmly subscribe to this view because in this electronic age, space is no longer a worry for lexicographers even though this might be repetitive and similar to cross-referencing techniques. Actually, this suggestion has been adopted by the latest learner's dictionary to appear, i.e. The Macmillan English Dictionary for Advanced Learners (*MEDAL*).

One more issue which required resolving was the part of the entry in which dictionary-compilers would place the collocates of the defined item. Syntagmatic lexical relations are usually accounted for in the examples rather than in the definitions (Marello, 1987 and Cowie, 1989 and Drysdale, 1987). This policy has been adopted by the compilers of *Collins COBUILD Advanced Learner's Dictionary* on CD-ROM and *OALD*; the latter seems to list collocations in the examples, separated by a slant stroke. This policy is sensible as far as it goes but there is a danger that users may mistake these words for synonyms. More recently, *CALD* has developed an alternative and perhaps a better technique where some words commonly used with the word one has looked up can be accessed by clicking the button **Collocations** presented in the entry. *LDOCE*, on the other hand, provides a good number of the words, i.e. nouns, verbs, adjectives or adverbs, used with a certain lexeme under the **phrase bank** which shows all the phrases containing the lexeme under scrutiny.

4. Collocational competence and prior collocational studies

Collocation has been approached from different perspectives employing two types of methodology. Several studies (see Jaén, 2007 and Siyanova and Schmitt, 2008) were concerned with productive collocational competence and involved the participants in translation tasks (Biskup 1992 and Bahumaid, 2006) or in cloze tests (Bahns and Eldaw, 1993 and Farghal and Obiedat, 1995). Some however focused on the receptive

dimension of collocational knowledge, mostly corpus-based (Bonk, 2001; Mochizuki, 2002; Barfield, 2003; Gyllstad, 2005 and Keshavarz and Salimi, 2007). In what follows, I review some studies to present a short account of the state of the art collocational competence research of the former type covering the two most frequent types of collocations: VN and Adj+N expressions (a thorough account of such studies is beyond the scope of this article).

4.1 Studies assessing learners' competence in VN collocations

Several studies have investigated EFL learners' VN collocational knowledge. Bahns and Eldaw (1993), for instance, tested advanced EFL learners' productive knowledge of VN collocations by a translation task and a cloze test and found that collocations presented a formidable problem for advanced learners. Collocational errors accounted for more than 48% of subjects' overall lexical errors. Al-Zahrani (1998) investigated the knowledge of lexical collocations among four academic levels of 81 Saudi English majors and explored the relationship between participants' collocational knowledge and their general language proficiency using a cloze test comprising 50 VN lexical collocations. The researcher found that there was a significant difference in his subjects' knowledge of lexical collocations among the different academic years. The knowledge of lexical collocations increased with the subjects' academic years. Besides, there was a strong correlation between the subjects' knowledge of collocations and their overall language proficiency.

In yet another study examining VN collocations extracted from native and non-native production, Howarth (1998) discovered that native speakers employed about 50% more restricted collocations than EFL learners. Both groups deviated from standard collocational forms; non-standard collocations accounted for around 1% and 6% of the production of native speakers and EFL learners, respectively. This may contrast with Nesselhauf (2003) who explored the nature of learner collocation and found out that the largest proportion of the errors committed by German-speaking learners of English, 79%, was with verb-noun collocations.

4.2 Studies assessing learners' competence in Adj+N collocations

One of the studies devoted to assessing EFL learners' competence in the Adj-N collocational aspect was Farghal and Obiedat (1995). Testing Jordanian university students' productive knowledge of NN and Adj+N collocations, the researchers found that testees could not handle collocations (cf. Winkler, 2001) and this led them to use strategies of 'lexical simplification', e.g. synonymy, transfer, etc. and to employ translation from Arabic.

In her attempt to assess Spanish university students' competence in both the receptive and productive collocational aspects of the written skill, Jaén (2007) has discovered that testees were unable to recognise and produce Adj+N collocations most of the time. Not surprisingly, collocations appeared to be more difficult at the productive level than at the receptive one. She concludes that this lack of collocational competence on the part of test-takers may impede their progress and lead them to fare badly in their academic demands.

Another interesting study in the line of Adj-N collocations is Siyanova and Schmitt (2008). Conducting a series of studies to test Russian EFL learners' mastery and production of Adj+N collocations, the researchers discover that very little difference existed between native speakers' and non-native speakers' use of acceptable collocations. The latter were slower in processing collocations, however. Moreover, it has been found that EFL learners demonstrated poorer intuition than native English respondents regarding the frequency of collocations. On the whole, the results suggest that the underlying intuitions of EFL learner and their fluency with collocations are far from those of native speakers of English.

On the whole, a review of collocational studies shows that there is a burgeoning literature on the types and structure of collocations and the way collocations are employed and translated, there has been relatively little research so far on the way learners handle and acquire collocations and hardly any research on the role of dictionaries in furthering this acquisition. In other words, there is scarcely any research on the way EFL learners extract VN collocations from general paper dictionaries, let

alone electronic dictionaries. There seemed to be a growing belief that electronic dictionaries are superior to their paper versions (Liou, 2000) where the former would be expected to surpass hard copy dictionaries in every respect, more so in the amount of help they offered as to collocational information¹. Many studies have been carried out into the use of educational technology to support acquisition of lexis, particularly with the help of dictionaries (e.g. Dolezal and McCreary, 1999; Martin, 1998; Nesi, 2000; Campoy Cubillo, 2002; Tall and Hurman, 2002; Beech, 2004; Albus, et al. 2005; East, 2007; Fry and Gosky, 2007 and Chon, 2008, to name but a few). However, I know of no study which has investigated the impact of EDs on users' judgment of the appropriateness of collocations. This study is therefore designed to fill this gap in the research literature and present a qualitative assessment of the way Arab learners use EDs, namely dictionaries on CD-ROMs, to handle collocations.

5. The study

This research presents first-hand data on Arab EFL learners' dictionary-using behaviour with regard to collocating words correctly.

5.1 Aim

The current study has been undertaken to assess Arab learners' collocational competence and it seeks to provide answers to the following research questions:

1. Can EFL learners judge VN expressions on the basis of entries for the components of these expressions in EFL EDs? On the basis of the results from other researches (see section 4 above), I expect that dictionary users cannot tell whether some VN collocations are acceptable despite the claim made by dictionary-compilers that

¹ Despite the fact that electronic resources are based on their printed counterparts, the former have plenty of additional information. The *Longman Dictionary of Contemporary English* on CD, for example, has, in addition to the A-Z dictionary, many extra features unavailable in the hard copy such as thematic dictionary- the Activator, Examples bank with a concordancer, short account of the collocational scope of some words, compendium of lexicultural expansion, collection of self-study exam exercises (with check-answer and show-answer buttons), word frequency and word origin information, usage notes about frequently misused words, picture gallery and pronunciation practice.

their most recent editions of learners' dictionaries contained more collocational information than ever.

2. Does the information about collocation available in EFL EDs enable users to make better judgements of the acceptability of correct (real) or incorrect (pseudo) VN expressions? I expect learners to do better with the real collocations for little information, if any, is proffered to warn users of the lexemes which cannot collocate with the word under consideration.
3. Do EFL EDs vary in their help to users regarding VN collocational information? The use of different dictionaries seems to have different effects on dictionary users. It is expected that users of *CALD* would fare better than users of *OALD* owing to the claim that lexemes are well-contextualised through extra examples borrowed from the Cambridge Corpus. Moreover, *CALD* lists some of the words commonly used with the lexeme in question in the examples and sometimes there is a special button, **Collocation**, which offers many of the nouns, adjectives, verbs or prepositions which co-occur with the word looked up.
4. How do EFL learners handle collocational information in EFL EDs? From learners' poor results in previous research (see Nesi and Meara, 1994, for example), I expect dictionary users not to scrutinise the explanation well enough to obtain the desired information. Dictionary users tend to skim the definition overlooking important information and hastily jump to conclusions. Research exploring the issue of learner collocation behaviour, e.g. Wray (2002: 201–202) showed that EFL learners ran risks and made “overliberal assumptions about the collocational equivalence of semantically similar items”. To this purpose, I shall ask some learners to provide verbal report data but it should be made clear that only some excerpts will appear below to reinforce the findings of the current study; the full verbal data merits a study of its own to appear soon.

5.2 Materials

The stimuli were 20 VN expressions, e.g. *crush resistance* which could be labelled as 'fixed combinations', i.e. obligatory collocability, and these were based on the expressions used by Alzi'abi (1995). Here, the range of synonymy of the verbs, according to Benson (1985a), would be restricted. In *stifle a yawn* and *file a lawsuit*, for example, only the verbs 'suppress' and 'bring' could be used instead of *stifle* and *file*, respectively. In *commit suicide*, no other verb would replace *commit*; 'drive' in *drive someone to suicide* is never a synonym of *commit*. The reason for choosing this type of stimuli was that 'restricted collocations' as a group are more difficult for EFL learners than 'free combinations' (Nesselhauf, 2005). VN collocations per se were selected on the grounds that these were believed to be the most important of all other types of lexical collocations categorised by Benson et al. (1997) and Lewis & Hill (1998).

Ten of the stimuli were made-up phrases, i.e. atypical or pseudo-collocations. The procedure we applied here to formulate these was to get the "collocator", i.e. the verb, of ten correct expressions replaced with a near synonym; the result was a deviant collocation, semantically unacceptable. The "base", i.e. the noun, however, remained unchanged. For example, instead of presenting the students with the expression *stifle a yawn*, I substituted *conquer* for *stifle*. Words seemed bound to present some difficulty were excluded. In selecting the stimuli, some help was got from Benson et al. (1997) and Hill and Lewis (1997). Moreover, an on line corpus, i.e. Simple Search of British National Corpus (<http://sara.natcorp.ox.ac.uk/lookup.html>) was navigated; corpora could be the best tools to demonstrate the collocates of items (see Scholfield, 1997 and Schmitt, 2000). Furthermore, the expressions were revised by two British experienced EFL scholars. The remaining ten expressions were left unchanged.

Subjects were not expected to know these expressions even though some of the components of the expressions were frequent. Two tests were developed. The first test, a pretest, was necessary to assess the testees' knowledge about the expressions before using the dictionary; this

contained the list of the 20 expressions in question and subjects had to say whether these expressions were acceptable. The second, the **main test**, comprised the same expressions but this time these were used in sentences with the two elements of the expressions underlined (see appendix). Special care was taken to ensure that these sentences were clear and provided sufficient contextual clues for understanding the overall meaning of the collocations. The subjects had to read the sentences and use the electronic dictionary to judge their acceptability. Order of entries was randomised. Real and made-up expressions were muddled up and the order of expressions in the main test was different from that in the pretest.

Two dictionaries on CDs were used: *OALD* (7th edition) and *CALD* (3rd edition). This means that we had two groups of testees, each using one dictionary. Unfortunately, we could not make use of *MEDAL* being acclaimed as a distinguished dictionary (cf. Bogaards, 2003).

5.3 Subjects

Testees in this study consisted of 130 second-year English majors at Damascus University, Syria. Characteristics of these subjects were as follows: 84 female, 46 male whose age ranged from 20 to 24. In order to quantify the impact of the independent variable, dictionary use, the participants were randomly selected and divided into two population groups: control group and experimental group; these were almost comparable in every respect. The experimental group was arbitrarily divided into two equal groups, thirty-one subjects each. The first group worked with *CALD* (henceforth CALDgr) and the other group used *OALD* (henceforth OALDgr). The two groups were equated on Meara's (1992) EFL vocabulary test (310), i.e. test No.10 at level three. CALDgr score on this test was (83.12, Sd 6.25 out of 100) whereas OALDgr score was (84.13, Sd 6.77 out of 100). An independent samples t-test demonstrated no significant difference between the two scores ($t=.59$, $p>0.05$). According to Meara (1992), these scores might suggest that subjects had enough lexical sophistication to cope with the entries and utilise the collocational information.

The two groups, i.e. the control and experimental groups, took the same pretest but only the experimental group did the main test since the effect of dictionary use is to be assessed by comparing the experimental group's main test (with a dictionary) with its pretest (without a dictionary).

During data analysis, I observed that some variation existed in the two groups' pretest scores. Possibly, the testees' knowledge about these expressions was diverse. Therefore, I undertook a matching process of both groups' scores to eliminate the differences between the average values and excluded all subjects whose scores I could not match which resulted in two identical pretest groups (see table 1). In each group, the final subject number was 62.

Table 1. Mean score of the experimental and control groups on the pretest (max. 20)

	mean score	Sd
experimental group	9.70	1.70
control group	9.76	2.60

Submitting this data to an independent samples t-test showed that there was no significant difference between the scores of the two groups ($t=0.123$, $P=.902$). If the score of the experimental group differed significantly after dictionary use, that difference would be attributable to the presence of the dictionary, the independent variable (see 5.5).

5.4 Procedure

Subjects took the pretest first and the main test followed immediately. Both tests were completed during regular class hours in the computer lab in the Faculty of Letters. Instructions were presented in English and further explanation was given in Arabic. Test-takers were told that the aim of the study was to investigate their intuition about VN collocations. To reiterate, the subjects' task was to decide which of the expressions were acceptable.

In total, 3720 answers were marked- 2480 for the experimental group

(both tests) and 1240 for the control group. As to the first objective, mean scores for correct responses were obtained for pretest and main test. Correct responses were awarded one point, while incorrect and "I don't know" responses (very few in number) were awarded zero points. The difference between the total mean scores would account for subject performance.

Concerning the second issue, whether dictionaries enabled subjects to make better judgements regarding any type of collocation, the testees' responses were broken down to check with which type of phrase, i.e. real or pseudo-collocations, they did best and the total mean scores for the two groups were computed. Four sub-scores were obtained for each subject: two mean scores for the real and pseudo-collocations on the pretest and two mean scores for the same items on the main test. The raw data analysed here was the number of times the two types of phrases were judged correctly.

It was also necessary to compute the possible percentage of **gain**, i.e. answers incorrect on the pretest and subsequently correct on the main test, and that of **loss**, i.e. answers correct on the pretest but subsequently incorrect on the main test. To do this, I matched the individual answers of test-takers on both tests. Four types of responses were distinguished. The first two types were: correct→correct and wrong→wrong. Here, the answers remained unchanged on both tests. The second two types were: wrong→correct, i.e. some **gain** was made, and correct→wrong, i.e. some loss was made. Results obtained from this analysis along with the preceding analyses helped me assess the help offered by EDs to judge the stimuli and consequently identify which dictionary impacted users more positively in answer to the third question.

With respect to the last issue, i.e. testees' behaviour, it was necessary to carry out a think-aloud protocol. Eight candidates, who were not part of the experimental group mentioned above, volunteered to verbalise and tape-record their thoughts so that one could describe their cognitive process when completing the test used by other participants. A special training session was held to show the candidates how to perform this task.

5.5 Results

The first issue in this study was to test Arab learners' ability to judge the appropriateness of VN collocations, i.e. to reject pseudo-collocations, by utilising the information in the entries for the two parts of the expression. The scores of the experimental group for correct answers on both tests are presented in table 2 below. These scores show that subjects did quite poorly- around chance level. The frequency of correct answers was low and the difference in scoring between the two tests was relatively small.

Table 2. Mean correct scores on the pretest and main test (max. 20)

	means	Sd
pretest	9.70	1.70
maintest	11.41	2.35

Undertaking a paired samples t-test, it appeared that the DICTIONARY USE effect was significant ($t= 4.616$, $p=.000$ with 61 df). Subjects appeared to benefit from using EDs in their judgement of the appropriateness of collocations but, as was expected, only little improvement was made. In other words, dictionary use improved the testees' scores but only slightly. This result, however, does not indicate the amount of collocational knowledge subjects have absorbed from dictionary explanations. This issue is considered below.

The second issue was to investigate whether more aid is provided to testees in the case of any of the two types of expressions. Table 3 below presents a breakdown by phrase category and illustrates the difference between testees' performance values with real and pseudo-collocations. Four scores were obtained for each subject. Generally speaking, the figures below show that little difference existed between scores for real and pseudo-collocations on both tests.

Table 3. Mean correct score for pseudo- and real collocations on both tests (max. 10)

	pretest		maintest	
	mean score	Sd	mean score	Sd
pseudo-collocation	4.98	1.69	4.77	2.16
real collocation	4.72	1.89	6.64	1.93

An independent samples t-test submitted to the made-up phrases showed no significant difference between the two scores on the pretest and the main test ($t = -0.600$, $p = .027$ with 61 df). However, a similar test showed that a significant difference existed between the scores for the real collocations ($t = 5.586$, $p = .000$ with 61 df). Evidently, participants did better with the real collocations though only slightly. This means that some benefit was derived from EDs which helped subjects fare better with real collocations.

To provide a clue as to why subjects failed most of the time, we need to assess the dictionary definitions and ascertain the existence of collocational information which helps users judge the expressions under scrutiny. Two EFL specialists were requested to examine the entries for both elements of all collocations and say whether there was any information, in any form and in any part of the entry, i.e. whether or not the collocations were listed as such, which could help judge the acceptability of the expressions in question. The assessors' evaluation was identical in all cases and this is presented in the following table.

Table 4. Collocational information coverage in both EDs

item*	<i>CALD</i>	<i>OALD</i>
1. administer an injection	yes	yes
2. coach a team	yes	yes
3. crush resistance	yes	yes
4. display bravery	yes	yes
5. draw up an agenda	yes	yes
6. hatch a conspiracy	yes	yes
7. override a veto	yes	yes
8. register a complaint	no	no
9. relinquish the floor	no	no
10. swallow anger	no	yes
11. augment experience	no	no
12. budge gear	no	no
13. conquer a yawn	no	yes
14. design music	yes	no
15. grip the chance	no	no
16. increase war	no	no
17. originate a job	no	no
18. provoke damage	no	no
19. retrieve consciousness	no	no
20. thrust a missile	no	no

* Items 1-10 are real phrases whereas 11-20 are pseudo-collocations

The third issue concerned whether any ED offered more help, i.e. whether any group fared better in the judgement of the expressions with the assistance of a particular ED. Contrary to expectations, the mean correct scores of the two groups (table 5) suggest that the two EDs were much the same. Neither dictionary appeared to help the testees very much and result in any substantial improvement even though dictionary use appeared to be effective (see above).

Table 5. Mean correct score of both groups on the main test (max. 20)

	mean score	Sd
CALDgr	11.67	2.49
OALDgr	11.16	2.22

Submitting these scores to an independent samples t-test showed no significant difference ($t= 0.860$ $P= .393$ with 60 df). Evidently the performance values of both groups were almost identical. However, this overall score camouflages the exact behaviour of the subjects with regard to type of collocation. Table 6 displays the amount of benefit participants derived from EDs regarding real collocations and pseudo-collocations.

Table 6. Mean correct score for real and pseudo-collocations of both groups (max. 10)

	real collocations		pseudo-collocations	
	mean	Sd	mean	Sd
CALDgr	6.25	1.76	5.41	2.12
OALDgr	7.03	2.04	4.12	2.04

Although both groups seemed to benefit from dictionary use, individual dictionaries did not seem to better affect the degree of improvement achieved by subjects. OALDgr fared better with regard to real phrases but the situation was reversed in the case of made-up phrases. A paired samples t-test was used to assess whether these differences were significant and revealed no significant difference in the case of real collocations ($t=-1.477$ $P= .750$ with 30 df). Despite the small amount of improvement, DICTIONARY USE was, according to a paired samples t-test, a significant factor in the case of pseudo-collocations ($t= 2.145$ $p=$

.040 with 30 df) with CALDgr significantly achieving more successfully.

Apparently, both dictionaries appeared to have slightly aided the testees in correctly judging the expressions. However, the improvement achieved was not particularly impressive in both cases.

Neither table above allows us to deduce the level of improvement, i.e. real amount of benefit brought by using dictionaries. It was therefore necessary to embark on further analysis to determine the possible percentage of **gain** and **loss**. Not surprisingly, table 7 shows that levels of gain were not large on any type of collocation.

Table 7. % of loss and gain on the main test relating to groups

	loss		gain	
	real collocations	pseudo-collocation	real collocation	pseudo-collocation
CALDgr13	24	29	24	24
OALDgr13	28	32	20	20

The above data tends to suggest that the amount of loss was greater in the case of made-up expressions on the part of both groups. Some improvement, by contrast, was achieved by subjects in the case of real expressions though unspectacular, particularly the score of OALD users. Submitting the data to t-tests showed no significant difference between the two groups regarding real expressions either for loss ($t=0.00$, $p>1.00$ with 59 df) or gain ($t=-0.64$, $p>0.05$ with 59 df). Likewise, no significant difference existed between the two groups regarding pseudo-expressions either for loss ($t=1.06$, $p>0.05$ with 59 df) or gain ($t=1.82$, $p>0.05$ with 59 df). This suggests that neither *CALD* nor *OALD* significantly affected subjects' performance in any of the four different cases.

5.6 Discussion

As shown in table 2 above, the success achieved by the subjects following dictionary consultation was trivial; this supports findings from previous research (e.g. Iqbal, 1987, Granger, 1998 and Al-Jabr, 2008). This result seems to corroborate the supposition expressed above that collocations constitute a problematic aspect for L2 learners. (see 5.1).

Surprisingly, not only did some testees get low scores but they also lost points on the main test, that is, they answered correctly on the pretest and changed their mind on the main test regarding individual items. One reason for this odd behaviour could be that participants adopted a hit-or-miss approach on the pretest. That is to say, participants did not have the slightest knowledge of the expressions and therefore answered haphazardly. Another and possibly more important reason could be that dictionary explanation misled subjects and consequently caused them to answer incorrectly.

As appeared in table 4 and was suggested by the data in tables 5 and 6, neither dictionary seemed to give enough information to help users infer the collocates of all defined verbs or nouns. One may venture to state that the dictionary information was now and again unclear if not rather ambiguous. Careful scrutiny of the entries of some made-up expressions reveals that little information existed to help users correctly collocate with the verb or noun in question. Little or no information at all was given as to the restrictions on the categories of possible collocates of the word under scrutiny (see table 4).

For example, the information provided at the entry for *budge*, in both dictionaries, was ambiguous. *CALD* definition of *budge*, [*budge* MOVE 1. *If something will not budge or you cannot budge it, it will not move I've tried moving the desk but it won't budge/I can't budge it*], is ambiguous as it does not specify that which is to be budged and does not clarify the 'subject' or the 'object' of the verb. Likewise, it is not definite whether *budge* implies carrying or pushing something forward. Had such information been present, the testees would more likely have answered successfully. The *OALD* definition was even worse: [*to move slightly; to make sth/sb move slightly: She pushed at the door but it wouldn't budge. The dog refused to budge. I heaved with all my might but still couldn't budge*]. Nothing in this definition suggests that one cannot *budge a gear*; on the contrary [*to move slightly; to make sth/sb move slightly*] might have encouraged users to collocate the word *gear* with *budge*. The inclusion of the verbs 'change' and 'shift' at the entry for *gear* in both dictionaries seemed not very helpful and could not stop test-takers from collocating *gear* with *budge*. Not surprisingly, the percentage 'loss' made on this expression was 35.5% for both *CALDgr* and *OALDgr*. The same is true of other expressions such as *thrust a*

missile, originate a job, etc. Entries for the components of these lacked sufficient collocational information to help users avoid misjudging the expressions.

One more example is the expression *retrieve consciousness*. *CALD* defines *retrieve* as [to find and bring back something *We taught our dog to retrieve a ball. .Computers are used to store and retrieve information efficiently*]. The phrase 'bring back something' is misleading and may delude users into thinking that *retrieve* could occur with *consciousness*. Likewise, those who consult the entry for *consciousness* will again be unwittingly deluded by the words 'lost' and 'recover' since it is possible to talk about losing and retrieving information and data, and consequently they may generalise this to *consciousness*. Dictionary users would not be any luckier if they tried the 'SMART thesaurus' button at the entry for *retrieve* where the verb 'recover' is among the first three synonyms offered. The same can be said about *OALD*.

It appears that not only definitions of made-up examples let users down but also some definitions of correct expressions were similarly confusing. Some definitions of the two parts of the real collocations seemed to offer little aid. For example, let us consider *CALD* and *OALD* definitions of *relinquish the floor*. Little guidance, if any, is offered at the entries for both elements to help recognise whether this is an acceptable phrase. *Floor* in *CALD* does not show that this word can occur with *relinquish*. Also, the usage of *floor* may well be unspecified:

3. [C usually singular] a public space for activities such as dancing and having formal discussions a dance floor The new proposal will be discussed on the floor of the House of Commons (= in Parliament) tomorrow. ... The chairman said that he would now take questions from the floor (= from the audience). 4. have the floor to have the right to speak. Silence, please, the Prime Minister has the floor. 6. take the floor start speaking The Chancellor of the Exchequer will take the floor for his Budget speech at 3.00 p.m.

It is not clear how *CALD*-compilers interpolated the meaning of *floor* as "the audience" in this context. This sense was inadequately added to the previous sense "a public space for activities such as dancing and having formal discussions a dance floor". It is likely that this sudden change in the explanation might have confused testees and consequently did not help them towards finding the right meaning. It might have been more

helpful if the compilers had given this sense a separate definition.

Likewise, *CALD* did not provide an adequate entry for *relinquish* and gave no clue as to whether *floor* could occur with it:

1. to give up something such as a responsibility or claim: He has relinquished his claim to the throne. She relinquished control of the family to her son. 2. to unwillingly stop holding or keeping something She relinquished her hold/grip on the steering wheel

Possibly, dictionary-compilers need to rethink their policy on what to include in their dictionaries; they might need to provide all categories of possible collocations, e.g. concrete, abstract, etc. With respect to *OALD*, the meaning of *floor* is plainly stated:

the floor [sing.] the part of a building where discussions or debates are held, especially in a parliament; the people who attend a discussion or debate: Opposition politicians registered their protest on the floor of the House. Ç We will now take any questions from the floor. AREA FOR WORK 6 [C, usually sing.] an area in a building that is used for a particular activity: on the floor of the Stock Exchange (= where trading takes place)

but it offers no help as to whether one can say *relinquish the floor*. *OALD*'s definition of *relinquish*, on the other hand, is perhaps more misleading than that of *CALD*.

to stop having sth, especially when this happens unwillingly SYN give up: He was forced to relinquish control of the company. They had relinquished all hope that she was alive. She relinquished possession of the house to her sister..

Then, both dictionaries seemed not to offer much help to enable users to determine whether it would be permissible to say: *relinquish the floor*. *CALD* merely states that one can *relinquish* a "responsibility" or "claim" while *OLAD* left the choice open to users who had to guess that *floor* was among those words covered by the term "sth" given at *relinquish*. It is important to know that only 15.5% of *OALDgr* answers were of the type wrong→correct compared to 19% for *CALDgr*.

As is clear in table 4, the two EFL specialists agreed that dictionary entries were not always helpful in judging the stimuli. It appeared that 60% of the definitions of both *CALD* and *OALD* contained no information at all to help users judge the acceptability of the expressions. It is worth mentioning that in most cases where the evaluators indicated

the existence of collocational information, the collocation under study was not included but rather some clues as to the collocates of the headword were given under one of the components of the expressions. The word *display*, for instance, is defined as:

to show a feeling: The British traditionally tend not to display much emotion in public. CALD

to show signs of sth, especially a quality or feeling: I have rarely seen her display any sign of emotion. OALD

The two definitions above do not provide sufficiently clear-cut information, let alone the collocation in question, to help the user tell that *bravery* or *courage* are among the concepts covered by the words 'feeling' and 'emotion'. Likewise, whereas only the verb 'set' was given at the entry for *agenda*, neither dictionary includes the word *agenda* among the items which co-occur with *draw up*.

to prepare sth, usually something official, in writing I've drawn up a list of candidates that I'd like to interview. CALD

to make or write sth that needs careful thought or planning: to draw up a contract / list OALD

In the same vein, CALD gives no information as to whether the word *complaint* can occur with register and what makes matters worse is that dictionary users would find it so difficult to decide which of the four senses might go with *complaint*.

1. [I or T] *to put information, especially your name, into an official list or record I registered the car in my name.*

2. [I or T] *to record, show or express something The Geiger counter registered a dangerous level of radioactivity. [FORMAL His face registered extreme disapproval of what he had witnessed*

3. [I or T] *INFORMAL If something registers, someone realises it and if someone registers something, they realise it: I scarcely registered the fact that he was there.*

4. [T] *When you register a letter or parcel, you send it using a special postal service, so that it will be dealt with in a special way and not be lost a registered letter*

Possibly, dictionary-compilers assume that all dictionary users are highly intelligent and can infer from the inclusion of the word 'disapproval' (see the second example at sense 2) that one can *register a complaint*. No verb was given under *complaint* save 'make'. Could it not be more convenient if lexicographers included verbs such as 'file', 'lodge', 'put

in', 'raise', 'register' and 'voice'? To be fair, *OALD* lists most of these verbs: 'file', 'lodge', 'make', 'put', 'renew', 'withdraw', 'submit' and 'uphold', either in the explanation or in the **Example sentences** section, but no mention was made of the verb *register*. The same holds true for other expressions such as *design music*, *originate jobs*, etc. I venture here that many of the wrong answers could have been averted if sufficient information had been provided under either element of the made-up expressions in the EDs used. This on the one hand counters Strevens' (1978:7) argument that learners' dictionaries had offered so wide information which provided 'fresh' help to all kinds of users, and on the other hand it substantiates Rogers' (1996:84) contention that electronic dictionaries tended to be "word-based rather than meaning-based" despite the massive amount of space available to them.

Sometimes, the inclusion of one word definitions, i.e. synonyms, could have been another reason which contributed to users' wrong judgements. It might have been difficult for testees to decide which of the collocates of the synonym would occur with the defined word. *CALD* for example states that *swallow* means NOT EXPRESS. It is highly likely that a dictionary user may associate words other than 'pride', 'anger', 'words', 'doubts', 'disappointment', etc. with *swallow*, that is to say, they might use words such as 'gratitude', 'opposition', 'regret', 'reservation', 'sentiment', 'support', 'sympathy', 'thanks' and 'thoughts' which usually occur with EXPRESS. If we examine the same entry in *OALD*, we will find the word 'feeling': *6[vn] to hide your feelings: to swallow your doubts*. Does this apply to all concepts covered by 'feeling'? In other words, can *swallow* be used with feelings such as 'fear', 'joy' and 'sadness'?

The argument about the clarity of the definitions dealt with above merits further investigation. We still have no idea how subjects went about their task and the way they handled the definitions in order to make judgements. Some prima facie evidence was drawn from the oral report data. A rough analysis of the data we obtained provided an insight into dictionary user thought-processes and tended not to bear out the above assertions. (We will not go into detail here because full details of the verbal report data merit a separate study).

One interesting finding was that subjects were mostly consulting the entry for the 'noun' first regardless of whether this appeared first or second in dictionaries. This behaviour is different from that of French EFL learners who tended to look up multiword expressions under the least frequent item rather than under the base or collocate (Bogaards, 1990). Arab learners' behaviour supports the suggestion offered by some linguists, e.g. Hausmann (1985) that collocational information should be entered at the entry for the noun. Let me reiterate that this might be somewhat of a sound suggestion because dictionary users usually need to know what can be done to the 'noun'.

Surprisingly, it happened that sometimes candidates risked judging the expressions without even reading the definitions. Possibly, that was because they were pretty sure that they had prior knowledge of the expression but nevertheless their responses were sometimes incorrect. But mostly, participants skimmed all the senses at the entry in question and after reading all explanations they usually returned to the sense they suspected as their target. They used to pause for a moment pondering whether this was the meaning fitting the source text. Interestingly, they sometimes read a certain definition and all the following examples more than once to ascertain the acceptability of the collocation. And once certain that they had grasped the clues, they formed their judgement.

When it was difficult for the subjects to deduce the correct answer from the explanations of both elements of collocations, they used to complain of the absence of any information which could help them answer correctly so much the worse with the pseudo-collocations such as *augment experience*, *thrust a missile*, etc. Actually, *OALD* provides little help as to whether or not the verb *augment* can be used with *experience*. Examining the entry of *experience* (all four senses) and the **Example sentences** section which was not used by any of the subjects, we find the verbs 'have', 'lack', 'learn from' 'gain' and 'bring'. Subjects complained that no examples at all existed to tell them how to talk about getting more experience, I mean 'accumulate' or 'amass'. Likewise, the definition of the verb *augment* [*to increase the amount, size, values, etc. of sth*] was also misleading. That is possibly why about 57% of the subjects gave incorrect responses on the main test above. The situation was not any

better with users of *CALD*. One subject who was happy to find out the button **Collocation** inside the entry for *experience* read, after clicking the button, “Um, verbs...**have, lack, gain, broaden...broaden your experience:** ...I'd like to broaden my experience of working with children. Um, ...let me carry on... **draw on, know from, learn from experience...** ‘broaden’ is fine. Let me see what ‘broaden’ means”. Having read the definition, this subject decided that *augment* is similar to ‘broaden’ and therefore could be used with *experience*.

It was interesting to note that following the formation of their judgements, some subjects used to turn back to context, i.e. the sentence where the collocation appeared, in order to verify the definition against the source text and ascertain that the judgement was sensible. After concluding that *override a veto* was correct, a user of *CALD* maintains: “Yes, we can easily say: Sometimes the USA **refuses to accept** the Security Council’s Veto”

One finding which is rather disappointing to dictionary-compilers and publishers was that some subjects did not bother with the new features added to EDs and when these features were consulted, this was carried out with haste. It is highly likely that dictionary users who perform hasty look-up operations may not notice this information or they may not be aware of the existence of these features. Too many buttons on one screen might be intimidating and might deter them from exploring some useful information. It seems that Arab subjects believed that they would spend too much time if they wanted to explore all these features (*OALD* screen has more than 12 different bars, buttons and tabs which open additional windows and give easy access to several programmes and features). If such useful information was jettisoned, one wonders whether dictionary-compilers had to stop fussing over these additions which distinguish the present-day EDs. Truly, dictionary-compilers seem to have made a considerable effort to produce the most versatile editions of their EDs but still they are not well aware of EFL learners’ real needs. Surprisingly, Sánchez Ramos (2005) found that Spanish EFL learners were not familiar either with multimedia dictionaries or online dictionaries, let alone the features in these EDs. It is possible that if our subjects were well-acquainted with ED, their results would be much better.

6. Conclusion

In this study, I have given an account of a research conducted with Arab EFL learners to ascertain whether they could judge the appropriateness of VN collocations by using EDs. Two types of collocations were provided, i.e. real and made-up phrases. On the whole, the results confirm the general and theoretical assumptions obtained by other scholars about dictionary use.

Arab dictionary users appeared to have
and were unable to judge most of the expressions correctly. Moreover, EDs, like print dictionaries, seemed to offer little help as far as collocations were concerned and modest success was achieved following dictionary consultation. Despite the fact that EDs provide a great deal of new information and thousands of additional examples, a great deal of collocational information is still lacking. Many entries in *CALD* and *OALD* offered multiple pieces of information but provided almost no cues to the clear representation of the collocates of the word in question. I daresay that testees' failure was mostly due to the lack of sufficient clues to help subjects identify the correctness of expressions. Data obtained from the oral report data supports this claim. Dictionary-compilers and publishers are recommended to reconsider the types of information they need to include and more importantly the layout and format of this information (cf. Winkler, 2001).

The current findings also urge us to join those who advocate the inclusion of collocations in EFL and ESL teaching (see for example Cowie, 1992; Granger 1998 and Nesselhauf, 2003) and call upon syllabus designers to integrate collocation instruction into EFL teaching material. I fully subscribe to Jaén's (2007:143) recommendation that there "would seem to be [an] urgent need to carry out an efficient pedagogical intervention to overcome students' collocational deficiencies".

Several empirical studies have been carried out to explore the effects of explicit collocation instruction on EFL learners' writing (Liu, 2000; Tseng, 2002), reading (Lien, 2003) and overall proficiency (Hsu, 2002). The results generally showed that direct collocation instruction was positively correlating with and possibly improving learners' language performance. Language instruction might focus on the way collocations are pieced together, along with the way they vary and the situations in which they are used. But Siyanova and Schmitt (2008:454) maintain that

“to develop good collocation intuitions in our learners is to institute a fundamental change in our teaching pedagogies, moving from a focus on individual words toward a focus on phrasal elements”.

To put it in a nutshell, the above findings are important as they enlighten us about the way dictionary users handle dictionary definitions and extract collocational information. However, more research undertaken with larger numbers of testees of different linguistic backgrounds and possibly using a greater number of stimuli of all types is still a must before the above findings would be taken on board.

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Received 26/4/2010.

Appendix

Name.....Year of study..... Age

Name of electronic dictionary used:

Each of the following 20 sentences contains a verb-noun collocation, i.e. a verb and noun which usually go together such as *commit suicide*. The use of these collocations is acceptable in some sentences and unacceptable in others. Use the dictionary on computer and decide whether the use of the sentence is acceptable (✓) or not (X). (A sentence is correct if it contains a correct collocation).

1. They registered a complaint that the headmaster acted in a negligent manner. ()
2. You cannot keep talking all the time; you should relinquish the floor quickly. ()
3. It took him three hours to help the drowning man retrieve his consciousness. ()
4. In his first six months in office, the manager originated 200 hundred new jobs. ()
5. The nurse has been instructed not to leave the ward and not to administer an injection to any patient without doctor Smith's approval. ()
6. He was obliged to swallow his anger as his boss did not allow him to complain after he had offended him. ()
7. Do not forget to draw up the agenda for our next meeting. ()
8. He volunteered to work for the British Telecom in order to augment his experience. ()
9. Gary Ablett, a former footballer, was chosen to coach Liverpool football team. ()
10. The composer needed two months to design a new piece of music for the festival. ()
11. Sometimes the USA overrides the Security Council's Veto. ()
12. The soldier had to conquer his yawns while the commander was giving his orders. ()
13. The rebels thrust three missiles at the new military base in Kabul. ()
14. The new Somali forces were planning to crush the rebels' resistance mercilessly. ()
15. They hanged all the people who hatched the conspiracy to overthrow the president. ()
16. Many people urged the commander-in-chief to increase the war with the enemies. ()
17. One important thing a driver has to know is when and how to budge gear. ()
18. The firefighters displayed utmost bravery when they rescued the women who were trapped in an upstairs room. ()
19. He found a nice second hand car and gripped the chance to buy it for \$ 400. ()
20. The recent war provoked too much damage to the buildings in Gaza. ()