

Arab EFL Learners' Use of Electronic Dictionaries

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Abstract

Modern educational and computer technology has greatly affected the design of electronic dictionaries. Various types and sizes have been produced ranging from hand-held devices to multimedia dictionaries on CD-ROMs. Unfortunately, little literature exists on their efficacy and the way these are used; therefore, there is now a pressing need for uncovering the way EFL learners use these tools.

This dictionary user profile, survey questionnaire, was constructed to fulfill this need and unearth the electronic dictionary-using habits of Arab EFL learners and underline the various facts about the names of the electronic dictionaries they owned, the reasons when, where, why and how dictionary users employed these dictionaries and whether there was any particular information they used more often. Endeavour was made to pinpoint any difficulties in using any category of information and reveal participants' look-up habits and attitudes towards dictionaries.

Although it is widely believed that electronic references are more useful than hard-copy references, findings from this research showed that electronic and print dictionaries were used similarly. Disappointingly, users were not fully aware of the bulk of information and features offered by dictionaries. More research remains to be carried out to reveal the image of electronic dictionaries among EFL learners and more specifically how real-world electronic look-ups are performed.

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1. Introduction

This age of high-tech gadgetry is not confined to nuclear weapons and space rockets but new technology is pouring its products into every aspect of our life including dictionary-making. Nowadays, there is a plethora of electronic lexicography and the market is crammed with electronic dictionaries of different types and brands which range from the hand-held and pocket-sized dictionaries to those interactive dictionaries on CD-ROMs, let alone Internet dictionaries since most dictionaries have recently made their way onto the Internet. But “how successfully these tools are employed” is an issue which remained unaddressed.

Recently published electronic dictionaries show a divergence from previous trends. Even though the macrostructure and microstructure of these resources have depended to a considerable extent on those of their hard-copy counterparts, electronic dictionaries (henceforth EDs) possess properties which set them apart from their paper versions. Rizo-Rodríguez's (2008) survey revealed that significant moves were being made by dictionary-makers to produce ‘versatile’, ‘multipurpose’ electronic dictionaries which surpassed their printed editions. Taking advantage of high-tech, lexicographers were able to increase the speed of look-up; extend methods of searching for information by providing a variety of search routes and include recordings of pronunciations to allow users to hear words or phrases spoken aloud.

Several researchers investigated the use of bilingual hand-held devices and dictionaries on CD-ROM particularly by Japanese, Taiwanese and Chinese EFL learners where these gadgets appeared to be much popular (cf. Nesi 1999) but the findings from these studies did not tally. A slight controversy seemed to exist over the use of electronic dictionaries by L2 learners. Taylor and Chan (1994), for example, contend that the teachers they surveyed recommended their students the use of the paper rather than electronic format. More importantly, most Hong Kong students thought that print dictionaries were more ‘detailed’ and more ‘accurate’ than their own electronic counterparts. In similar vein, Weschler (2000) argues that electronic dictionaries seem not to be a ‘wise’ investment on the part of the EFL learners unless those learners translate or study on the move.

To many, EDs tend to be preferable to hard-copy dictionaries. Liou (2000:474) maintains that electronic dictionaries are superior to their paper versions for the former have more comprehensive and detailed information. Should this not be the case, the paper versions will continue to be recommended by language teachers. EDs are then believed to be powerful language learning tools and a good number of teachers advocate the use of such tools and foresee that the day when EDs replaced hard-copy dictionaries and sold in millions would not be far-off for these had changed the way people find and retrieve information. Nesi (1999:56), maintains that EDs "have the advantage of providing the user with almost instant access to a database much larger than a single book"- many times the quantity of information provided in a paper dictionary. Actually on line and other electronic dictionaries are now increasingly employed as teaching aids to enhance vocabulary acquisition (Scott and Nagy 1997 and Hulstijn 2001) and have been found to increase native school children's motivation and engagement in reading tasks (Swan et al. 2005).

The present study is undertaken with the above raised question in mind to shed some light on the way Arabic-speaking learners of English use EDs to ascertain whether these learners take full advantage of such tools.

2. Background on Dictionary User's Reference Needs

Recently, literature on dictionary users' reference needs, monolingual as well as bilingual dictionaries has burgeoned. For example: Quirk 1974, Ard 1982, Hartmann 1983a, Bensoussan et al. 1984, Sora 1984, Tono 1989, El-Badry 1990, Starren and Thelen 1990, Nesi and Meara 1991 and Nuccorini 1992. Generally, the purpose of these studies was to elicit information on (a) the role dictionaries play in language learning (e.g. Diab 1990) (b) learners' problems with learning English (e.g. Nesi 1994) and (c) how much and how often or how successfully dictionary users used dictionaries (e.g. Atkins et al. 1987). Among the questions the above studies addressed were: (1) how did users find what they needed in dictionaries? (2) could users understand dictionary explanation? and (3) did users with different linguistic backgrounds behave similarly?

Studies which handled dictionary user's reference needs fall into two categories. First, there are studies which dealt with native speakers' needs (e.g. Barnhart 1962, Quirk 1974, Greenbaum et al. 1984, Kipfer 1987, Jackson 1988 and Benbow et al. 1990) and second we have those studies which investigated L2 learners' needs (e.g. Tomaszczyk 1979, Baxter 1980, Galisson 1983, Ellis and Forman 1993 and Ducroquet 1994). These were far too extensive to review in a work of this size, nonetheless. To show the status of dictionary users' reference needs and habits, below is a brief review of those highly relevant to the current study. Distinction will be made between those studies which focussed on hard-copy dictionaries and those which focused on EDs.

2.1 Users' Reference Needs: Paper Dictionaries

Béjoint (1981) was possibly among the first important researches into EFL learners' reference needs. A 21-item questionnaire was administered to 122 French University students majoring in English **إخطأ!** **الإشارة المرجعية غير معرفة**, to unveil the way they used monolingual dictionaries (MDs) and to probe areas of learners' reference skills. Meaning was the most sought-after type of information and some way behind came spelling, syntax, synonyms and pronunciation, in this descending order. Albeit not large in proportion, problems with look-up operations were: 'vague definitions' and 'missing words'. French students noted that their dictionaries had only little information on idioms, slang words and Americanisms. Similar complaints were made by the German-speaking learners of English (Snell-Hornby 1987). (Many of these complaints were dealt with and responded to in present-day editions of EDs). Béjoint (1981) concluded that MDs were mainly used for decoding and dictionary information was not exploited to learners' best advantage. In a replica of this study, Alzi'abi (1995) found that Arab learners studying at British universities were similar to French learners. However, the problem of 'missing words' was found to be further aggravated in the case of Arabs.

Another useful study was Kharma (1985) which attempted to reveal the reference needs of some 284 English majors at Kuwait University. The researcher used two versions of a questionnaire; one had

to do with MDs and the other with bilingual dictionaries (BDs) besides some small-scale tests. It appeared that subjects were using dictionaries mainly for reading, 88%, and writing, 80%. Meaning, as always, was the most sought-after category, followed by spelling, derivatives, synonyms, grammar, and pronunciation in this descending order. Most informants, 90%, were dissatisfied with MDs. 'Missing words' and 'missing meaning' were blamed by 84% and 79% of the subjects, respectively. Piecing together all results, Kharma (Ibid) concluded that a bilingualised dictionary which combines features of BDs and MDs is needed in order to alleviate the danger of learners' excessive use of BDs.

Iqbal (1987) defined the most common learners' problems when using dictionaries. A questionnaire was administered to 700 second-year Pakistani graduates focusing on semantic, syntactic, pragmatic and lexical levels. About 51% of the subjects used dictionaries frequently (at least once a week). It appeared that about 99%, 85%, 43% and 42% of learners claimed that they hunted for meaning, spelling, pronunciation and grammar, respectively. Regarding the activities for which MDs were consulted, 53%, 29%, 22%, 18%, 13% and 9% of Pakistanis reported that they referred to dictionaries for reading, writing, L2-L1 translation, L1-L2 translation, speaking and listening purposes, successively. Iqbal (Ibid) concluded that MDs were chiefly used for decoding rather than for encoding (cf. Béjoint 1981 and Atkins and Knowles 1990).

Kipfer (1987) reports an investigation into the acquisition of American high school pupils of dictionary skills and the impact of these skills on their language needs. Native English pupils used MDs chiefly for checking meaning and spelling. Approximately 79% used MDs for writing purposes (cf. Jackson 1988) and only occasionally pupils used dictionaries as a guide to pronunciation. Unexpectedly, data revealed that pupils had problems with metalanguage rather than with finding words (cf. Kharma 1985). Interestingly, Kipfer's (1987) study shows that native pupils' reference needs are to a large extent similar to EFL learners'. Both user groups seemed to employ MDs for similar purposes and encountered almost the same difficulties in handling MDs explanations.

Battenburg (1991) also explored the use of ESL students at Ohio

University of EFL MDs focusing on the effect of L1 background and language proficiency level on dictionary usage habits. The commonest motive for dictionary use was to check meaning followed by spelling, abbreviations and irregular verb forms. Examples seemed to be neglected by all subjects. As always, MDs were principally used for decoding. Unlike translation, speaking and listening rarely prompted Battenburg's subjects to use MDs. The researcher concludes that learners' behaviour and opinion about dictionaries were heavily affected by their language level.

A more recent study but using a slightly different approach is Campoy Cubillo (2002). A rather task-oriented approach was employed to describe Spanish first-year chemistry majors' dictionary perception. Subjects were asked to compile their own dictionaries using the most important words they came across in their study including any information deemed necessary for comprehension and production. She found that the most frequently recorded category was 'L1 equivalent', followed by pronunciation and examples. Once again dictionary users focused on meaning more than anything else. To dictionary-compilers' disappointment, only a very small number of students included collocational information. On the whole, the activity of creating a dictionary helped subjects use dictionaries more efficiently.

Nesi and Hail (2002) investigated the 'receptive' dictionary-using habits of EFL learners studying at British universities under some 'natural' methods of data collection. They found that most words were looked up successfully. However, more than 50% of the subjects failed in at least one out of five dictionary consultations; they could not locate the right entry to obtain the information they needed for the context under scrutiny. This was due to subjects' dictionary-use poor strategies to adjust definitions to context. Unpredictably, none of the subjects admitted to dictionary-use problem.

2.2 Users' Reference Needs: Electronic Dictionaries

One of the earliest studies concerned with EDs was Weschler's (2000). A simple experiment investigating users' look-up speed and

a questionnaire exploring the frequency and place of using EDs were both tried with some Japanese learners of English. Subjects appeared to look up words about 23% faster with EDs. Unexpectedly, only 11% of the subjects (88 out of 781) owned EDs. These references, to dictionary-makers amazement, were rarely used on the move. Like most other studies, EDs were used least when listening.

Winkler's (2001) is another valuable study which investigated how some 30 EFL learners of various nationalities used learner's dictionaries, in book form and on CD-ROM. All participants agreed that EDs enabled them to perform easier, quicker and more convenient look-ups (cf. Weschler 2000). Participants ran into difficulty when scanning long entries, locating idiomatic phrases and using collocations. Some categories of information, e.g. abbreviation, synonyms, codes, etc. appeared to be avoided altogether.

Ryu (2006) reports on the results of a questionnaire administered to some Korean EFL university students to investigate their reference needs and habits with both hard-copy and electronic dictionaries. All subjects appeared to possess at least one dictionary, most often a bilingual dictionary; pocket electronic dictionaries came next. The researcher found out that a large number of subjects did not receive any instruction on how to use dictionaries and this might have impacted their reference skills. Among the features of dictionaries valued by Korean learners were ease of use, portability and comprehensibility.

On the whole, the above studies have demonstrated that the main priorities of users do not differ from one environment to another, from time to time or even from one linguistic background to another (cf. Ilson 1990) save with some slightly varied proportions. Five categories of information were almost equally sought by native and non-native users: meaning, spelling, pronunciation, synonyms and grammar. There was, however, a general consensus among most dictionary users that finding some words or meanings, looking-up multi-word items and understanding metalanguage were problematic. Dictionaries appeared to be used for writing more often by natives than by non-natives. Expectedly, some

minor differences existed between user groups of different specialisations (cf. Tono 1988 and El-Badry 1990). The needs of English-majors were presumably different from those of non-English majors. Types of questions and the rather complicated frequency scales used might have contributed to these differences.

Nowadays and with the advent of electronic dictionaries, it is a pity that little research has been conducted and little information has been gathered about the way EDs are used either for decoding (comprehension) or for encoding (production). The studies to date are not so penetrating and mostly seemed to focus on vocabulary acquisition (Hulstijn 1993, Knight 1994, Hulstijn and Trompeter 1998, Laufer 2000, Laufer and Hill 2000). These can be criticized for the small number of questions they addressed and more importantly all were concerned with non-Arab learners of English.

It would be interesting, therefore, to set out a research project to ascertain whether Arab users' priorities regarding electronic reference needs remain the same as those with paper versions. Research into EFL learners' electronic reference needs may yield different answers to the questions outlined above simply because EDs have introduced new 'learner-centred' features which in turn provide valuable information for improving learner correct usage of language and level of proficiency. By way of illustration, the frequency and order of the sought-after categories would be different.

In order to gather clear evidence relating to electronic dictionary use and to uncover how much use was made of these tools by Arab learners, it would be logical to administer a questionnaire to a good number of Arab dictionary users (see below).

3. Limitation of the Study

This study suffers from the widely-acknowledged syndrome of questionnaires, that is, lack of absolutely reliable data. Questionnaire-based studies were criticised for taxing respondents' memories and that is why some surveys came with contradictory figures and unreliable data (cf. Kipfer 1987 and Battenburg 1991). When answering questionnaires,

subjects might tick variables which they had never used; therefore, findings from questionnaires should be taken cautiously. In our case, the data gathered would be that of respondents' perception rather than the real look-up process. To date, research methodology specialists were incapable of suggesting an alternative data-collection method. However, of those questionnaire-based studies reviewed above, the current study might be the best yet being more comprehensive, more convenient and less disadvantageous than most other studies into EFL learners' electronic reference needs.

4. The Study

This study helps us gain some insight into the way Arab learners of English deal with EDs.

4.1. Aim

The researcher endeavours to tackle the following issues:

1. The proportion of Arab university students who make use of EDs. In this electronic era where private and state-owned companies are devoting tremendous effort to promote IT industry, it is expected that these tools are equally popular with most Arab EFL learners.
2. The purpose for which Arab learners use EDs and whether this is different from that for print editions. Here, I wish to discern how often, when and where EDs are used and for which type of information and whether EDs are mostly utilised for decoding. My supposition is that English majors use EDs more for encoding than decoding; some categories of information, e.g. pronunciation, stress and grammar will be utilised more often than others, simply because these categories differ considerably from their L1 counterparts and Arab L2 learners need them badly.
3. Arab learners' familiarity with EDs and whether use of EDs poses them any problems. Here, I hope to ascertain whether Arab learners are acquainted with the information and features present in EDs. In the light of findings from prior research, I expect Arab learners not to be familiar with all the information and features. In addition, I want to establish whether subjects encounter the same problems faced by other learners using such tools. Because EDs contain a greater

number of entries and more information than hard-copy dictionaries which could be easily accessed, it is likely that dictionary users do not suffer from the problem of 'missing words'.

4. The attitudes of Arab learners towards these references, i.e. whether or not they were critical of EDs. I also seek to unveil what Arab learners require in an ideal dictionary and whether they have specific needs to be met.

4.2. Materials

A thirty-five-item questionnaire was the material used in this study (see appendix). These carefully chosen questions were not exhaustive, nevertheless; it could have been more useful to include some more items but there was fear that introducing extra questions may affect the answers negatively and respondents may answer superficially. Some benefit was derived from many prior questionnaire-based researches, particularly Béjoint (1981), Nesi and Hail (2002) and Weschler (2000), but a genuine attempt was made to overcome the generally fatal flaws in questionnaire surveys. Every single effort was exerted to ensure clarity and avoid notoriously woolly ideas and leading or hypothetical questions which respondents find so infuriating. To ensure consistency in responses and to make data analysis easier, frequency scales were kept to minimum-three options. It was hoped that this will eventually yield more trustworthy responses.

The questionnaire was a mixture of closed and open formats. The former would help elicit information about type of ED, experience with the dictionary and strategies for dictionary use whereas the latter would help uncover respondents' opinions and the perceived advantages and disadvantages of dictionary use. It is widely acknowledged that allowing sufficient space for comments, respondents can qualify their answers and consequently provide insightful information about dictionary use.

4.3. Subjects

The study was undertaken in the English Department at Damascus University. Initially, the questionnaire was administered to 940 first, second, third and fourth year English majors; these were consulted as language users as well as language specialists. A preliminary analysis

showed that only 300 subjects indicated that they owned EDs. Following a close analysis of the data, it emerged that 11 more respondents did not complete all parts of the questionnaire and were thus eliminated. Then we were left with a total of 289 participants and the results discussed below are of those participants. 54, 73, 82 and 80 of the subjects belonged to the first, second, third and fourth year, respectively. Accidentally, the number of female participants, 172, substantially exceeded that of males, 117 and these ranged in age from 18 to 26 years.

4.4. Procedure

An eye-catching questionnaire with neatly-typed and clearly-printed questions was presented in simple and direct language with the purpose of revealing the factual data about the way our university students perceive and use their EDs. Clear and concise instructions were given on how to complete the questionnaire and each question (or block of similar questions) has its own clear instructions. Subjects were required to answer honestly ticking only the type of information or activity for which they referred to EDs in real-life look-ups, and were told that if their responses were negative these would be just as useful as more positive ones.

Respondents completed the forms at their own pace in class and in the presence of the researcher who assisted them in understanding the questions and clarified any points that remained vague. The closed-ended questions were answered by means of a check mark [✓]. All responses were analysed and frequencies were computed. In addition, some cross-tabulations were run when this deemed necessary.

4.5. Data Analysis and Results

Below is an evaluation of the results obtained from the current survey and all related questions were subsumed under main headings. Brief comments were made and some comparisons were drawn with other researches into dictionary users' reference needs.

4.5.1 Ownership and Name of EDs

It should be reiterated that the questionnaire was administered to

940 participants and only about 30%, 289 subjects, appeared to own EDs but the data analysed here was that of ED owners. Obviously, only less than one-third of the population investigated owned EDs; this of course does not support my speculation that most subjects might have EDs. Likewise, Weschler (2000) found that only a very small number of Japanese EFL learners possessed EDs.

This low percentage of ED ownership on the part of Arab respondents many years after Weschler's (2000) study is a disappointment to publishers of EDs and EFL teachers who advocate the use of EDs. One reason for this might be that these tools were too costly. Another reason could be that some students were 'techno-phobic' or they might mistakenly believe that such dictionaries had been time-consuming and therefore preferred the 'flip-flip-flip' of dictionary pages (Yonally and Gilfert 1995). An informal discussion with those who did not own any ED showed that many were really not aware of the existence of such dictionaries, particularly those on CD-ROMs.

A variety of electronic dictionaries, monolingual and bilingual, were named by subjects. Specifically, four dictionaries had the highest proportions of owners. These were Atlas, a pocket-sized dictionary, at 35%; Oxford Talking Dictionary (*OTD*) at 28%; Longman Dictionary of Contemporary English on CD (*LDOCE*) at 21% and Oxford Advanced Learner's Dictionary on CD (*OALD*) at 21%. Another dictionary used but by a smaller number of students was Cambridge Advanced Learner's Dictionary on CD (*CALD*), 10%. Other dictionaries, e.g. Najm, Collins Cobuild Advanced Learner's Dictionary on CD (*COBUILD*), Sharp and Talking Merriam were also mentioned but obtained very low percentages. Not surprisingly, *OALD* had the greatest proportion of owners among French learners, 45% (Béjoint 1981). Sora (1984) too found that most Italian learners of English owned *OALD*. The Oxford products are still keeping up an impeccable long-standing reputation. One cannot, however, account for the prestige *OALD* is endowed with at the expense of the other learner's dictionaries.

Data showed that most informants owned more than one electronic dictionary (max. 3), including dictionaries on CDs, hand-held devices and

pocket-sized dictionaries. This may suggest that a good number of English majors were not satisfied with their main EDs even though some students might have relied on print monolingual and bilingual dictionaries. By way of comparison, other researchers, e.g. (Sánchez Ramos 2005) found that their subjects possessed more than one dictionary, BDs and MDs.

4.5.2 Date of and Reason for Purchase

As to the date when respondents bought their electronic dictionaries, it turned out that a large proportion of students bought their EDs immediately after enrolling at the university. Only a small number of informants, 5%, claimed to have bought their EDs before enrolment on the English course ranging between 1 and 5 years. Possibly, they might have bought these EDs at the early stages of their learning English, viz. at preparatory or secondary classes. It is difficult to tell whether these students could decide for themselves which dictionary was most appropriate during a short period of enrolment on their English study. However, about 22% did not mention any date. Most of Baxter's (1980) subjects bought their paper MDs before enrolling at university. 55% and 29% of Béjoint's (1981) students, in comparison, bought their MDs during the first and second years of study, respectively.

In general terms, the following reasons were offered for why they purchased EDs: (a) EDs pronounced words (42%), (b) EDs contained spelling features (29%), (c) EDs were fast and easy to use (55%) and (d) EDs were almost weightless (24%).

It should be added that some respondents demonstrated that they bought these to increase and enrich their vocabulary.

4.5.3 Consultation on the Appropriate ED to Purchase

Arab university students claimed that they bought their EDs on teachers' recommendation (21%) or friends' advice (27%). 15% said that they bought the EDs they owned following consultation with a bookshop assistant and a similar proportion bought them upon a family member's suggestion. However, 21% indicated that these dictionaries were bought on no person's advice but perhaps because this was the only reference

tool available to them, the one displayed on bookshop shelves. It is relevant to say that these reasons were not the subjects' own answers; rather, the researcher furnished them with these choices. This data suggests that EFL teachers had little role to play in students' choices.

In comparison, the above finding also agrees with Sora's (1984) and Atkins and Knowles' (1990). 85% French EFL learners said that they bought their MDs on their tutors' recommendations (Béjoint 1981). Possibly, French respondents might have been obliged to buy a particular dictionary by their English Department.

4.5.4 Types of Information Hunted in EDs

Counter to my expectation, the respondents claimed that they usually referred to more than one kind of information and this, to some extent, may suggest that they were conscious of what existed in EDs (see 4.5.7). As was the case in all studies reviewed above, meaning was ranked first most frequently used category but this time with a much smaller proportion 68%. Although dictionaries are an indispensable source for comprehension, meaning clarification and verification, not all subjects seemed to be preoccupied with meaning. One cannot think of any reason to justify this finding. Other categories of information were used by much fewer subjects. 49% of the subjects used dictionaries for pronunciation. Next, but some way behind, came spelling at 28% (cf. 4.5.2). Actually our students were expected to consult EDs for pronunciation and spelling more often because of the inconsistency of the English pronunciation and orthography in comparison with Arabic counterparts bearing in mind that Arabic has a straightforward phonetic and writing systems. Similarly, spelling and pronunciation were rarely consulted by Béjoint's (1981) subjects. This low proportion might be imputed to the fact that European EFL learners might have profited a lot from cognates for both pronunciation and spelling.

In similar vein, Arab learners seemed not to bother very much about grammar, 22%. Stein (1990:404) believes that "The strong grammatical component in EFL dictionaries increases this reluctance [the learner's] to use such dictionaries". Other dictionary users majoring in English were found to use dictionaries for grammar quite often (cf.

Tomaszczyk 1979, Sora 1984, Kharma 1985 and Snell-Hornby 1987). This might be ascribed to the fact that those respondents were in the first place conscious of the existence of grammatical information in dictionaries and were able to comprehend and use it despite Herbst and Stein's (1987) finding that advanced learners failed to grasp all grammatical symbols and profit from all grammatical information in dictionaries. As to Arab learners, one cannot exclude the possibility that Arab learners might not be aware of the abundance of grammatical information in dictionaries. It can also be added that users might have used grammar books instead. It could be true, however, that the respondents had mastered sufficient amounts of syntactic knowledge, thereby requiring fewer look-ups. Most English syllabi in the Arab world were to a large extent grammatically orientated.

Some information was found to be the least consulted. For instance, 21%, 20% and 15% of the subjects used their EDs to check antonyms, examples and synonyms, respectively. Synonyms were much less hunted for by Arab EFL learners than by other groups. It is difficult to tell why this percentage was so low in our case. The figure to do with examples is to a large extent consistent with what has been mentioned above (see 4.5.12).

In answer to the question whether there was any type of information which they sought most often, 50% said "yes" and listed: meaning of literary, technical and cultural items; idioms; pronunciation; usage notes; collocations and verb patterns, in this descending order.

Regarding their satisfaction with the amount of information offered by their EDs, a large proportion of respondents claimed that they were generally satisfied with the amount of information provided. However, this question might have disguised any particular problems they had encountered with any specific type of information; unfortunately no question was included to uncover this problem.

4.5.5 Variety of Activities in Which Subjects Were Engaged

It appeared that EDs were employed for a variety of activities. Top of the list came L2-L1 translation, 55%. Probably, this rather high

percentage was because the respondents had several translation courses. Next, but some way behind, came writing at 45% followed by L1-L2 translation at 38% and reading at 34%. More than half of Arab EFL learners tended not to use EDs for either writing or reading (cf. El-Badry 1990). Speaking came fifth in order of priority at 30% and last was listening at 24%. Our subjects tended to use dictionaries for speaking more than other EFL learners. Presumably, English majors might use a dictionary for speaking more than non-English majors because the former would use English as a medium of study and might use it for their presentations and tutors meetings. Diab (1990) claimed that 209 out of 278 subjects reported that they used dictionaries in their preparation for oral presentations. In general, dictionary use for speaking is less popular than for other activities.

Broadly speaking, most EFL learners were not fully and regularly employing dictionaries for production. Only a small proportion of all populations relied on dictionaries for written activities. It is not clear what can be done to ameliorate this situation.

4.5.6 Use of the Features Available in EDs

New educational technologies have enabled publishers to introduce a wide diversity of features to enhance language description and help improve learners' language proficiency. Some EDs have some features in common but many vary in a good number of cases (see Nesi 2000, Bogaards 2003 and Rizo-Rodríguez 2008). It should be noted that information to do with these features is not displayed straightforwardly in the text of the definition window but users can retrieve additional information by clicking on the different tabs and buttons available.

Because some features are exclusive to some dictionaries, the frequencies of users are rather small. The largest proportion of respondents, 37%, claimed that they used the 'Spell Checker', next, but some way behind, came users of 'Study Pages', 25%. 21% claimed that they used 'Phrase bank'; 19% used 'Word Origin'; 18% used 'Example sentences'; 15% used 'American and British Differences'; 14% used 'Collocations'; 13% used each of 'Common Learner Errors' and 'Get-It-Right'; 12% used each of 'Cultural Notes' and 'Express Yourself' and

11% used 'Usage Notes'. 'Verb Endings' and 'Activate your language' were used by 10% each. Other features such as 'Smart Thesaurus', 'Avoiding Offence', 'Wordfinder' and 'Word Building' were used by no more than 8% each.

It is highly likely that the presence of too many buttons and tabs on one screen might be intimidating. In *LDOCE* on CD, for example, there are about twenty different tabs and buttons including: Writing Assistant, Spoken Examples, Teacher's Lessons, Phrase bank, Example bank, Activate your language, Activator, Exercises, Grammar, web/email POP UP (allows for look-up while word processing), tools, search, OK, Menu, Word family, Word origin, Verb form, Word set as well as WORD CHOICE and WORD FOCUS charts. Although these tabs and buttons which come with different shapes and colours may entice users to use them but many users might be burdened with their big number especially if they used the dictionary as they were in the middle of a reading or writing session and could not afford sufficient time to navigate all these. It would be interesting to conduct a study, something of the think-aloud or diary type, to explore how dictionary users handle these buttons and tabs.

4.5.7 Advanced Searches

A dictionary user can very easily look up a word by simply typing it and clicking 'Find'. Now what if a student wanted to look up a word whose spelling was not fully known to him (say a word heard while attending a lecture)? The solution is an absolute breeze. Most dictionaries on CD-ROM allow you to type the part of the word you knew and use wild cards, i.e. symbols such as '*' and '?' which represent 'one letter' and 'any number of letters', successively. According to *CALD*, wild cards are also useful for finding words that all have the same ending and for choosing how one wants to search the dictionary. In other words, one can choose to search just for verbs or just for phrasal verbs or even just for phrasal verbs that contain the word 'out' or even searching for offensive words or words which are always plural. By way of illustration, typing '*ism' using *CALD*, one could obtain more than 300 words all ending with 'ism' ranging from *absenteeism* to *Zoroastrianism*.

30% of the participants claimed to have performed wild card or advanced searches, regardless of frequency of use. It is a pity that a large number of dictionary users were unaware of the existence or possibly ignored such excellent facility which required massive efforts on the part of dictionary-compilers and software designers. Dictionary publishers are therefore in sore need of an efficient way to capture users' interest and familiarise them with all aspects of the dictionary under use (see also Winkler 2001). One may suggest that software experts make it impossible for dictionary users to open the dictionary upon installation without a compulsory guided tour to optimise the benefit to users. Thanks to software designers who produced some dictionaries which featured 'guided tours'; these 'guided tours' were actual videos combining animation and narration, e.g. *CALD* and *LDOCE* or graphic tutorials, e.g. *OALD* (see Rizo-Rodríguez 2008). Such user-friendly facilities can do miracles; they can help familiarise users with the content of EDs and seduce users into utilising them to their best advantage.

4.5.8 Frequency of ED Use

A relatively substantial proportion of respondents (52%) claimed to refer to EDs daily. It is highly likely that English majors need to use dictionaries often because of their daily contact with the language. About 24% indicated that they consulted their EDs several times a week and only 8% used them once a week. Surprisingly, some 15% were content with using them less often; a cross-tabulation run showed that those were mostly fourth-year students. Presumably, this large proportion of infrequent use of EDs was because the respondents had familiarised themselves with the terminology in their courses so that they no longer needed to refer to dictionaries so often. One more reason could be that the students were so fluent that their reference to a dictionary was less often. Better EFL learners need to use dictionaries less often compared with less proficient learners (Bensoussan et al. 1984 and Neubach and Cohen 1988).

Béjoint's (1981) findings were almost similar to the above ones; 40% of his subjects used their MDs daily and 52% used them at least once a week. Baxter (1980), in stark contrast, reported that only 11% of Japanese students consulted MDs daily. One cannot think of any reason for such a result but to ascribe it to learner over-reliance on BDs.

4.5.9 Types of Words Looked up Most Often

54 % of the subjects reported that they looked up idioms most often. Encyclopaedic and scientific words were looked up by 43% and 40%, respectively. A cross-tabulation run revealed that those who claimed to use encyclopaedic words were also availing themselves of using on line dictionaries and the link to the Net while using EDs. Access to further information, e.g. encyclopaedic information is actually gained through links to on line resources. This is an evidence of respondent's consistency (see 4.5.4 and 4.5.14) and it assures that dictionaries were mainly used for decoding. Abbreviations were hunted by 34%. In comparison, 65% French learners claimed that they looked for idioms and 55% and 49% looked for encyclopaedic words and abbreviations, respectively.

4.5.10 Use of Drawings and Tables

51% of the respondents agreed that drawings and tables are essential to help understand meanings and use lexical items correctly. However, it was found that only 12% made use of pictures. It is highly likely that many dictionary users were not aware of the availability of a large number of pictures in EDs. Rizo-Rodríguez (2008) demonstrates that some EDs (e.g. *LDOCE* on CD) integrate drawings and photographs exclusively into entries to help users understand the definitions of certain lexical items and so do the latest versions of Atlas (e.g. SD9100S1). Other EDs (e.g. *CALD*) present alphabetically grouped illustrations and pictures of semantically related items in separate windows which can be easily invoked by means of an on-screen button.

Although quite a large proportion of the respondents browsed through dictionaries, many seemed not to be conscious of the availability of pictures or some other features in those EDs at their disposal. Although this figure for picture use is higher than those found by other researchers, it is still quite low, for no obvious reason. However, it might be that some hand-held or pocket-sized dictionaries just did not contain pictures.

4.5.11 Browsing Through EDs

72% of the respondents indicated that they sometimes flecked through EDs for no particular reason but possibly to acquire something new. In contrast, no more than 55% of Béjoint's (1981) subjects claimed to browse through their dictionaries. Surprisingly, Iqbal (1987) reported that only 7% of Pakistani EFL learners said that they flecked through dictionaries; most probably, this was due to the fact that Pakistani learners were not English majors. I fully subscribe to Diab's (1990:175) call upon dictionary-makers and course planners to capitalise on this habit among dictionary users. One way lexicographers can motivate EFL learners and arouse their curiosity to browse through dictionaries is by making the metalanguage easier to follow.

4.5.12 Preference for a Particular ED

Those who claimed to own more than one ED admitted their preference for one of three main dictionaries with *OTD* being the most acclaimed (42%). Next came Atlas at 29% and last was LDOCE on CD at 19%. Other dictionaries were also mentioned but with negligible proportions. The reasons they furnished included good coverage of words, 20%; popularity, 17%; adequate coverage of examples, 16% (students here were possibly refereeing to LDOCE Examples bank and OALD Example sentences); inclusion of usage notes, 11%; handiness and light weight (easy to carry around), 10%; ease of use, 9%; time-saving tool, 9%, and inclusion of collocations, 7% (cf. Nesi and Hail 2002).

4.5.13 Occasions When Dictionary Users Could not Find What They Sought

57% of the respondents reported that they sometimes could not find what they were looking for. This runs counter to the presupposition that dictionary users will not encounter any difficulty finding words in EDs. However, this proportion is still greater than what has been revealed by other researchers. Béjoint (1981), for instance, reported that only 26% of his subjects suffered from the problem of missing words; he imputed this problem to the type of word looked up. This outstanding problem known as "missing words" was encountered by most dictionary users (cf.

Alzi'abi 1995 and Nesi and Hail 2002). I suggest this issue is worthy of investigation to uncover the reasons behind it. It should be mentioned that it was hard to handle the data obtained from cross-tabulating the proportion for missing words with EDs in use. Possibly, if users read the user's guide before using the dictionary, they could improve their look-up strategies and this large proportion of 'missing words' might have been considerably reduced. To dictionary-compilers disappointment, 47% of the subjects under study did not take the trouble to read the user's guide. Béjoint (1981) reported that 34% French EFL learners never studied dictionary introductory matters. Now, we should admit that this is an intricate problem from which almost all dictionary users, not to exclude native speakers, had suffered. Dictionary-compilers and EFL specialists alike are urgently requested to find a way to seduce users into reading these guides which would maximise the benefit they derive from EDs. It should be noted that user's guides in EDs are much shorter and easier to follow than the fore-matters in hard-copy dictionaries; the latter seemed to deter EFL learners from reading them thoroughly or even cursorily (cf. Crystal 1986).

Some subjects provided words which they could not find. Scrutinising the cited shortcomings, I discovered that these were infrequent or highly technical and specialised words. Examples were: *suggestopedia*, *prolepsis*, *collocable*, *heterogeneity*, *cataphoric*, etc. Such words were really nonexistent even in very large desk dictionaries. This suggests that the problem of 'missing words' can partly be ascribed to the fact that the words looked up did not exist in those EDs in use. Prima facie evidence was supplied by Aarts (1991). Whereas 24 words taken from letters A, B and C existed in COBUILD, only 12 and 5 words existed in OALD and LDOCE, respectively. Possibly, learners were not using the proper dictionaries which could serve their demands well. However, some of the words mentioned, e.g. *interdisciplinary*, *idiosyncrasy*, *absurdity*, *oesophagus*, etc. were present in most EDs named above; no reason can be thought of to explain why subjects cited them, however. Some of the examples provided seemed not to be real English words, e.g. *sightology*, *defamiliarisation*. Sometimes the subjects were unable to find words because they perhaps could not recognise that the word was made up of a base and a suffix or a verb and

a particle, e.g. 'lashes out'.

It is highly likely that if dictionary users received intensive training sessions in how to use dictionary, maximal benefit would be derived from dictionaries and all types of information would be fully utilised. Disappointingly, only 34% respondents reported that they had been provided with some informal instruction on how to use dictionaries. Ryu (2006) too found that only 41% respondents received some instruction. Nowadays, some English departments are cognizant of this problem and therefore have introduced courses to teach dictionary use. It is hoped that all other English departments will follow suit in no time.

4.5.14 Satisfaction with EDs

53% of the respondents expressed their satisfaction with their EDs. Although this is not very large a proportion, compared with that of Béjoint's (1981), 77%, it is still interesting. Cross-tabulating this with year of study, it appeared that most of those who were content with their EDs were third- and fourth-year students. This very result leads us to acknowledge the claim that the more advanced the learners, the greater is their satisfaction with dictionaries (Tomaszczyk 1979, Bensoussan et al. 1984, Neubach and Cohen 1988, Atkins and Knowles 1990 and Battenburg 1991). Another cross-tabulation run revealed that 71%, 80% and 67% of the subjects who owned *LDOCE*, *OALD* and *CALD*, respectively, were satisfied with these dictionaries. A very small proportion 17%, expressed their dissatisfaction with EDs and 30% were unable to decide.

Interestingly, 68% of the subjects reported that using EDs had very positively affected their views of how useful these tools were. In answer to a related question, the respondents agreed that the explanation in their EDs enabled them to (a) understand words in context, 66%, (b) use words correctly in both speech and writing, 64%, (c) get to know the word(s) which occur(s) with a certain lexical item, collocates, 57%, and (d) know whether a word is considered technical, scientific, literary, legal, etc., 58% (cf. Nesi and Hail 2002). Once more, a cross-tabulation run revealed that a good number of those who agreed with the above statements were owners of dictionaries on CDs. One can reasonably conclude that the subjects were taking the questionnaire seriously and

consequently answering consistently. This suggests that EFL learners were deriving considerable benefit from these dictionaries which seemed to have surpassed those hand-held and pocket-sized electronic dictionaries such as Atlas, Najm, etc. because of the various useful features they had.

It should be added that a question about whether users had problems understanding the definitions was deliberately not included because I actually perceived that most learners might not have trouble with reading and understanding dictionary definitions because dictionary-compilers were employing a 'defining vocabulary' to enable their potential users to understand the dictionary explanation.

4.5.15 Place of Using EDs

The data showed that many respondents claimed to have used dictionaries in more than one place. The largest proportion of respondents, 76%, used their dictionaries at home and 30% used them in the classroom. It also appeared that 13% used them in the library but only 6% used them on the bus; a cross-tabulation run revealed that the last two groups belonged to those who owned hand-held devices and pocket-sized dictionaries such as Atlas, sharp and Najm. Interestingly enough, those who used EDs on the bus were all male students. This small amount of dictionary use on the move did not bear out our expectation. Given that hand-held and pocket-sized dictionaries are much smaller and lighter to carry than all other dictionaries, it was perceived that these tools were bought to be used on the move.

4.5.16 Employment of On Line Dictionaries

Surprisingly, a high proportion of the informants, 71%, claimed to use on line dictionaries; this reflects subjects' fondness for the Internet. Among those on line dictionaries mentioned were Babylon, Google, Oxford English Dictionary, Cambridge, Longman, Sakhr, Encarta, Alwafi, Easylingo, Vox, Firefox, etc. (None however specified which Cambridge or Longman version they were using but EDs are often identified by the name of the marketing company). Some on line BDs named by Spanish trainee translators were: Cambridge dictionaries on line, Babylon, Vox; the on line MDs were: Oxford, Merriam-Webster,

Wordmisht and American Heritage Dictionary (Sánchez Ramos 2005). Apparently, some of the dictionaries used by Spanish subjects were seemingly not known to Arab learners.

About half of our sample group, 48%, admitted obtaining more details about a word not supplied by the dictionary on CD-ROM through the links to an on line dictionary. On the one hand, this shows that quite a good number of students were aware of the existence of this facility in some EDs and it also gives us an idea about the number of students who could access the Net, on the other hand. The facility of invoking an on line dictionary when using EDs was found to be most liked by users (Guillot and Kenning 1994).

4.5.17 Employment of Print Dictionaries

It appeared that some 67% still use print dictionaries alongside their EDs. Cross-tabulating this result with the names of dictionaries owned showed that most of those subjects who claimed to have paper dictionaries were originally among those who reported that they owned one of the learner's dictionaries on CDs, 56%. Then only around 11% of those subjects who claimed to own a paper dictionary were originally not having one of the dictionaries on CD-ROMs, i.e. having hand-held devices or pocket-sized dictionaries such as Atlas, Najm, Franklin or Sharp. Evidently, only 33% had dispensed with print dictionaries. This might be an encouraging finding to publishers of electronic dictionaries as if it heralded a new era where EDs might be prevalent. But taking on board the finding that only one-third of university students owned EDs, these tools are far from taking place of print dictionaries at least in this part of the world and for several more years to come.

4.5.18 Technical Problems and Comments

42% Arab EFL learners reported that they once faced technical problems with EDs. Unfortunately, no question was formulated to identify the nature of problem encountered and whether this was a hardware or software problem. However, some of the comments made by the respondents were about the bad-quality batteries used in their pocket-sized dictionaries. It should be made clear that only a few respondents provided comments; these were subsumed under the

following headings.

1. Pronunciation of all entries together with a special bar to display all phonetic symbols. At face value, this sounds a reasonable suggestion, particularly the second part. However, instead of using a special bar for phonetic symbols, these might be displayed on a different window at users' request, i.e. by clicking on the transcription of the item under scrutiny, something along the lines of that facility available in *OTD*.
2. A dictionary which deals equally with British and American 'Englishes', that is, two in one. Why not? Dictionary-compilers could merge the *Longman Dictionary of American English* into the *Longman Dictionary of Contemporary English*. Difficulties notwithstanding, this is still a sound suggestion.
3. A section which contains information to help avoid errors—something similar to the Longman Dictionary of Common Errors. Apparently, Arab EFL learners seemed to share these views and comments with most other dictionary users.

5. Conclusion

On the whole, the results of this study were not very different from those reached by other researchers investigating EFL learner use of dictionaries in book and electronic forms. Some of the findings, however, did not bear out some of my suppositions made earlier. For example, the results did not support the supposition about EDs ownership, that is, not all Arab learners appeared to own or employ any type of electronic dictionary. Most EFL learners, e.g. Japanese, Taiwanese, Hong Kong and Spanish EFL learners tended to use them considerably less than what dictionary-compilers and EFL teachers hoped or expected; Arab learners were no exception perhaps because such dictionaries were out of their price range. These days, Japanese, Taiwanese and Hong Kong companies are competing fiercely for IT business and might be selling this electronic gadgetry at cost price or even give them almost gratis. Hence, more people are expected to possess them. One more reason for not using these gadgets, and even general-purpose dictionaries, could be the fact that Arabs seldom refer to dictionaries to decode words in their L1.

The rather small number of ED users counters Meijis's (1992:152) prediction about "the imminent demise of the dictionary as a book" which will soon be superseded by electronic and on line dictionaries (see also Nesi 1999). Yes, it is true that EDs are on the way to be popular with EFL learners but Meijis' (1992) prediction would not come true in the foreseeable future at least in this part of the world where such dictionaries cost a fortune. Our results allow us to suggest that paper dictionaries will continue to be in use and would hardly vanish in favour of electronic dictionaries for years to come.

Contrary to my speculation, EDs, like MDs, were not used more for encoding than for decoding. Cowie (1983:107) claims that learners "use their EFL dictionary for interpretive rather than productive purposes". Even English majors seemed not to be very different from other EFL learners in other fields of study. Again, the expectation that some information might be used more often did not come true. Grammar, for example, was a neglected aspect by most users. Only 22% used EDs for grammar. Those coloured screens with new layouts could not stimulate them and draw their attention to use grammar components (cf. Lemmens and Wekker 1991).

Even though a good proportion seemed to be familiar with many of the features and types of information offered by dictionaries and despite the fact that ease of use and information aplenty are typical of electronic dictionaries, EDs are still an underused resource because very little teaching actually goes on where they are available. Intuitively, dictionaries will remain ineffective unless all problems are satisfactorily remedied and a joint effort is put into acquainting dictionary users with this stuff.

My assumption was true regarding 'finding words'; 59% of the respondents claimed that they encountered the problem of missing words. The figure obtained did not tally those of other researchers', however. There may be two possible reasons why Arab learners experienced this problem:

1. Subjects might have looked up infrequent or highly specialised

items which did not occur in General EDs. This assumption is borne out by the words which could not be found in the EDs used.

2. Subjects might have meant missing meanings rather than missing words. It should be admitted that neither question in the present study gave this alternative. Many studies discovered very high figures for missing meanings (e.g. Hartmann 1983a, Kharma 1985 and Iqbal 1987). Polysemous words might be the cause of the trouble. It is worthwhile following this up to help unveil any element that had a bearing on users' real-life look-up behaviour.

In addition, dictionary size, dictionary typology (cf. Campoy Cubillo 2002) and subject wrong approaches to dictionary explanations may have played some role in the aggravation of this problem and consequently the unproductive use of dictionaries. Such studies may reveal the way Arab learners handle dictionary information in real-life dictionary use tasks.

On the whole, findings from the current study and from most other studies into reference skills enable us to conclude that EDs and hard-copy dictionaries were used similarly. Little benefit in both cases was derived from the wealth of information in dictionaries. Grammar, user's guides and abbreviations seemed to be avoided by most users. Alzi'abi (1995:24) conceives of the following reasons to account for this phenomenon: (1) Lack of fit between lexicographers' presuppositions and users' abilities (Hartmann 1987). Quirk (1974) rightly argues that there are cases where what dictionary-compilers see as essential, dictionary users consider peripheral, (2) Users' lack of awareness of the information included in dictionaries (cf. Neubach and Cohen 1988 and Jackson 1988) and (3) Lack of prerequisite knowledge hindering successful dictionary use (cf. Iqbal 1987 and Kipfer 1987).

Dictionary publishers who invest huge amounts of money in order that they cater for EFL learners' needs need to stop pouring huge amounts of information as a great number of users do not use them. It seems sensible that more research is carried out on a larger scale in terms of material and number of 'researchees' before deciding on what to retain and what to remove from their new editions.

References

- Aarts, F. 1991. OALD, LDOCE and COBUILD: three learner's dictionaries of English compared. *CILL*, 17, 1-3, 211-226.
- Alzi'abi, S. E. 1995. Missing words and missing definitions: NL Arabic speakers' use of EFL dictionaries. Unpublished PhD thesis, University of Wales, Swansea.
- Ard, J. 1982. The use of bilingual dictionaries by ESL students while writing. *ITL Review of Applied Linguistics*, 58, 1-27.
- Atkins, B. and F. Knowles. 1990. Interim report on the EURALEX/AILA research project into dictionary use. In: T. Magay and J. Zigny (eds.) 1990, 381-392.
- Atkins, B., Lewis, H., Summers, D. and J. Whitcut. 1987. A research project into the use of learners' dictionaries. In: A. Cowie (ed.) 1987, 29-43.
- Barnhart, C. 1962. Problems in editing commercial monolingual dictionaries. In: F. Householder and S. Saporta (eds.) 1962. *Problems in Lexicography*. Bloomington: Indiana University Press, 161-181.
- Battenburg, J. 1991. *English Monolingual Learners' Dictionaries: A user-oriented study*. Lexicographica Series Major, 39. Tübingen: Max Niemeyer Verlag.
- Baxter, J. 1980. The dictionary and vocabulary behaviour: a single word or a handful? *TESOL Quarterly*, 14, 3, 325-336.
- Béjoint, H. 1981. The foreign student's use of monolingual English dictionaries: a study of language needs and reference skills. *Applied Linguistics*, 2, 3, 207-222.
- Benbow, T., Carrington, P., Johannesen, G., Tompa, F. and E. Weinert. 1990. Report on the New Oxford English dictionary User Survey. *IJL*, 3, 3, 155-203.
- Bensoussan, M., Sim, D. and R. Weiss. 1984. The effect of dictionary usage on EFL test performance compared with student and teacher attitudes and expectations. *Reading in a Foreign Language*, 2, 3, 262-276.
- Bogaards, P. 2003. Medal: a fifth dictionary for Learners of English. *International Journal of Lexicography*, 16, 1, 43-55.
- Campoy Cubillo, M. C. 2002. Dictionary use and dictionary needs of ESP students: An experimental approach. *International Journal of*

- Lexicography*, 15, 3, 206-228.
- Cowie, A. 1983. On specifying grammar. In: R. Hartmann (ed.) 1983b. *Lexicography: Principles and Practice*. London: Academic Press, Inc, 99-107.
- Cowie, A. (ed.). 1987. *The Dictionary and the Language Learner: Papers from the EURALEX Seminar at the University of Leeds, 1-3 April 1985*. Tübingen: Niemeyer.
- Crystal, D. 1986. The ideal dictionary, lexicographer and user. In: R. Ilson (ed.) 1986. *Lexicography: An emerging international profession*. Manchester: MUP, 72-81.
- Diab, T. 1990. *Pedagogical Lexicography: A Case Study of Arab Nurses as Dictionary Users*. Tübingen: Niemeyer.
- Ducroquet, L. 1994. Are bilingual dictionaries useful linguistic tools? *Language Learning Journal*, 9, 48-51.
- El-Badry, N. 1990. Bilingual dictionaries of English and Arabic for Arabic-speaking advanced learners of English. Unpublished PhD thesis, University of Exeter.
- Ellis, D. and D. Forman. 1993. Review: New dictionary resources. *MET*, 3, 1, 72-81.
- Galisson, R. 1983. Image et usage du dictionnaire chez les étudiants (en langue) de niveau avancé. *Etudes de linguistique appliquée*, 49, 5-88.
- Greenbaum, S., Meyer, C. and J. Taylor. 1984. The image of the dictionary for American College student. *Dictionaries: Journal of the DSNA*, 6, 31-52.
- Guillot, M. and M. Kenning. 1994. Electronic monolingual dictionaries as language learning aids: a case study. *Computers and Education*, 23, 1-2, 63-73.
- Hartmann, R. 1983a. The bilingual learner's dictionary and its uses. *Multilingua*, 2, 4, 195-201.
- Hartmann, R. 1987. Four perspectives on dictionary use: a critical review of research methods. In: A. Cowie (ed.) 1987, 11-28.
- Herbst, T. and G. Stein. 1987. Dictionary-using skills: a plea for a new orientation in language teaching. In: A. Cowie (ed.) 1987, 115-127.
- Heid, U., Evert, S., Lehmann, E. and C. Rohrer (eds.) 2000. *Proceedings of the ninth Euralex International Congress, EURALEX 2000*. Stuttgart: Universität Stuttgart.

- Hulstijn, J. H. 1993. When do foreign-language readers look up the meaning of unfamiliar words? The influence of task and learner variables. *MLJ*, 77, 139–147.
- Hulstijn, J. H. 2001. Intentional and incidental second language learning: A reappraisal of elaboration, rehearsal and automaticity. In: P. Robinson (ed.) 2001. *Cognition and second language instruction*. Cambridge: CUP, 258–286.
- Hulstijn, J. H. and P. Trompeter. 1998. Incidental learning of second language vocabulary in computer-assisted reading and writing tasks. In: D. Albrechtsen et al. (eds.) 1998. *Perspectives on foreign and second language pedagogy*. Odense, Denmark: Odense University Press, 191–200.
- Ilson, R. 1990. Present-day British lexicography. In: F. Hausmann, O. Reichmann, H. Wiegand, and L. Zgusta (eds.) 1990. *Dictionaries. An International Encyclopaedia of Lexicography*, 2, Berlin: De Gruyter, 1379-1385.
- Iqbal, Z. 1987. Aspects of the learner's dictionary with special reference to advanced Pakistani learners of English. Unpublished PhD thesis, Aston University.
- Jackson, H. 1988. *Words and Their Meaning*. London: Longman.
- Kharna, N. 1985. Wanted: a brand-new type of learner's dictionary. *Multilingua*, 4, 2, 85-90.
- Kipfer, B. 1987. Dictionaries and the intermediate student: communicative needs and the development of user reference skills. In: A. Cowie (ed.) 1987, 44-54.
- Knight, S. 1994. Dictionary use while reading: the effects of comprehension and vocabulary acquisition for students of different verbal abilities. *MLJ*, 78, 3, 284-299.
- Laufer, B. 2000. Electronic dictionaries and incidental vocabulary acquisition: does technology make a difference? In: U. Heid et al. (eds.), 849–854.
- Laufer, B. and M. Hill. 2000. What lexical information do L2 learners select in a CALL dictionary and how does it affect word retention? *Language Learning and Technology*, 3, 2, 58–76.

- Lemmens, M. and H. Wekker. 1991. On the relation between lexis and grammar in English learners' dictionaries. *CILL*, 17, 1-3, 227-242.
- Liou, H. C. 2000. The Electronic Bilingual Dictionary as a Reading Aid to EFL Learners: Research Findings and Implications. *Computer Assisted Language Learning*, 13, 4-5, 467-476.
- Magay, T. and J. Zigny (eds.) 1990. *BudaLex '88 Proceedings: Papers from the 3rd International EURALEX Congress*. Budapest: Akadémiai Kiadó.
- Meijs, W. 1992. Computers and dictionaries. In: C. Butler (ed.) 1992. *Computers and Written Texts*. Oxford: Blackwell, 141-165.
- Nesi, H. 1994. The use and abuse of EFL dictionaries: how learners of English as a foreign language read and interpret dictionary entries. Unpublished PhD thesis, University of Wales, Swansea.
- Nesi, H. 1999. A user's guide to electronic dictionaries for language learners. *International Journal of Lexicography*, 12, 1, 55-66.
- Nesi, H. 2000. Electronic dictionaries in second language vocabulary comprehension and acquisition: The state of the art. In: U. Heid et al. (eds.), 839-847.
- Nesi, H. and P. Meara. 1991. How using dictionaries affects performance in multiple choice EFL tests. *Reading in a Foreign Language*, 8, 1, 631-643.
- Nesi, H. and R. Hail. 2002. A study of dictionary use by international students at a British university. *International Journal of Lexicography* 15, 4, 277-305.
- Neubach, A. and A. Cohen. 1988. Processing strategies and problems encouraged in the use of dictionaries. *Dictionaries: Journal of the Dictionary Society of North America*, 10, 1-19.
- Nuccorini, S. 1992. Monitoring dictionary use. In: H. Tommola and K. Varantola (eds.) 1992. *EURALEX '92 Proceedings I-II: Papers submitted to the 5th EURALEX International Congress on Lexicography in Tampere, Finland*. Tampere: University of Tampere.
- Quirk, R. 1974. *The Linguist and the English Language*. London: Edward Arnold.
- Rizo-Rodríguez, A. 2008. Review of five English learners' dictionaries on CD-ROM *Language Learning and Technology*, 12, 1, 23-42.

- Ryu, J. 2006. Dictionary use by Korean EFL college students. *Language and Information Society* 7, 83-114.
- Sánchez Ramos, M. 2005. Research on dictionary use by trainee translators. *Translation Journal*, 9, 2. (<http://accurapid.com/journal/32dictuse.htm>)
- Scott, J. A. and W. E. Nagy. 1997. Understanding the definitions of unfamiliar verbs. *Reading Research Quarterly*, 32, 2, 184–200.
- Snell-Hornby, M. 1987. Towards a learner's bilingual dictionary. In: A. Cowie (ed.) 1987, 159-170.
- Sora, F. 1984. A study of the use of bilingual and monolingual dictionaries by Italian university students of English. *Papers on Work in Progress*, 12, 40-46.
- Starren, P. and M. Thelen. 1990. General dictionaries and students of translation: a report on the use of dictionaries in the translation process. In: T. Magay and J. Zigny (eds.) 1990, 447-458.
- Stein, G. 1990. From the bilingual to the monolingual dictionary. In: T. Magay and J. Zigny (eds.) 1990, 404-407.
- Swan, K., van t' Hooft, M., Kratcoski, A. and D. Unger. 2005. Uses and effects of mobile computing devices in K–8 classrooms. *Journal of Research on Technology in Education*, 38, 1, 99–112.
- Taylor, A. and A. Chan. 1994. Pocket electronic dictionaries and their use. In: W. Martin, W. Meijis, M. Moreland, E. ten Pas, P. van Sterkenburg and P. Vossen (eds), *Euralex '94 Proceedings*. Amsterdam: Euralex, 598-605.
- Tomaszczyk, J. 1979. Dictionaries: users and uses. *Glottodidcation*, 12, 103-119.
- Tono, Y. 1988. Exploring the cognitive strategies of dictionary use: a study of EFL learners' idioms look-up operations. *The Bulletin of the Kanto-Koshin-Etsu English Language Education Society*, 2, 67-82.
- Tono, Y. 1989. Can a dictionary help one read better? On the relationship between EFL learners' dictionary reference skills and reading comprehension. In: G. James (ed.) 1989. *Lexicographers And Their Works*. Exeter: University of Exeter Press, 192-200.
- Weschler, R. 2000. An experiment using electronic dictionaries with

EFL students. *The Internet TESL Journal*, 6, 8.

<[Http://iteslj.org/articles/weschler-electrodict.html](http://iteslj.org/articles/weschler-electrodict.html)>

Winkler, B. 2001. English learners' dictionaries on CD-ROM as reference and language learning tools. *ReCALL*, 13, 2, 191-205.

Yonally, D. and S. Gilfert. 1995. Electronic Dictionaries in the Classroom!?! Bah, Humbug! *The Internet TESL Journal*, 1, 1.

<<http://iteslj.org/Articles/Yonally-ElecDict.html>>

Dictionaries

Cambridge advanced learner's dictionary on CD-ROM. (3rd edition), 2005. Cambridge University Press.

Collins Cobuild advanced learner's English dictionary on CD-ROM. (5th edition), 2006. Harper Collins Publishers, Ltd.

Longman dictionary of contemporary English, writing assistant edition on CD-ROM. (4th edition), 2005. Pearson Education, Ltd.

Macmillan English dictionary for advanced learners on CD-ROM. (2nd edition), 2007. Macmillan Publishers, Ltd.

Oxford advanced learner's dictionary on CD-ROM. (7th edition), 2005. Oxford University Press.

Appendix

This project is designed to unveil the reference needs of Arab learners of English concerning electronic dictionaries (ED). Your cooperation will help dictionary-makers take account of your needs in any future editions of learners' dictionaries.

Please answer the questions below.

Name..... Sex..... Year of Study:.....

1. Do you own an electronic dictionary? Yes [] No []

2. Which dictionary (or dictionaries) do you own?

Cambridge on CD [] Najm [] Cobuild on CD []

Longman on CD [] Atlas [] Oxford on CD []

Oxford speaking [] Sharp [] Talking Meriem []

3. When did you buy this dictionary (or these dictionaries)? [200...]

4. Why did you choose this one/ the main one you bought?

5. Do you use any on line dictionaries? Yes [] No []

6. If your answer is "yes", name this dictionary (or these dictionaries).

7. If you use several dictionaries, which one do you prefer?

8. Why do you prefer this particular dictionary?

9. Do you usually use a paper dictionary? Yes [] No []

10. The reasons for using an ED are:

it pronounces words [] it is fast []

it has spelling features [] it is weightless []

11. Who did you consult before you bought your ED?

A friend [] a family member [] a teacher [] a shop assistant [] No one []

12. How often do you use your ED?

Daily [] five times a week [] three times a week [] once a week []

Not at all []

13. Where do you usually use your ED? (tick as you actually use it)

at home [] at college [] on the bus [] in the library []

14. Which type of information do you usually make use of in your ED?

meaning [] grammar [] spelling []

pronunciation [] synonyms [] antonyms []

pictures [] exercises [] examples []

15. In case they are available in your ED, which of the following features (components) do you often use?

Phrase Bank [] Examples Bank [] Activate-Your-Language []

Word Origin [] Example Sentences [] Wordfinder tool []

Spell-check [] Smart Thesaurus [] Word Building []

Verb Endings [] Collocations [] Common Learner Errors []

Usage Notes [] Am/BrE Differences [] Animations []

Avoiding Offense [] Cultural Notes [] Expressing Yourself []

Get-It-Right [] study pages (about grammar, vocabulary, pronunciation) []

16. Is there any type of information which you look for more often? Yes [] No []

17. If yes, what is this type of information?

18. For which sort of activity do you use your ED?

Reading [] Writing [] Speaking []
 Listening []
 Translation from English into Arabic [] Translation from Arabic into English []

19. Drawings and tables are essential in an ED? Yes [] No []

20. What kind of words do you look up in your ED?

Encyclopedic words [] Scientific words [] Idioms [] Abbreviations []

21. Do you browse through your ED to learn new words? Yes [] No []

22. Can you remember occasions when you couldn't find what you were looking for?

Yes [] No []

23. Please mention any particular word(s) which you couldn't find in your ED?

24. Do you sometimes obtain details about a word not supplied by the dictionary on CD-ROM through the links to an online electronic dictionary. Yes [] No []

25. Have you ever faced technical problems using an ED? Yes [] No []

26. Were you satisfied with the amount of information provided by your ED (or EDs)?

Yes [] No []

27. Do you think that it is important to read the user's guide before using an ED?

Yes [] No []

28. Use [] if you agree or [X] if you disagree with the statements that the information in EDs enables you to:

understand words in context []
 use words correctly in both speech and writing []
 get to know the words which go with the word under study []
 know whether a word is technical, scientific, legal, literary, etc. []

29. After using an electronic dictionary, have you changed your view of how useful these dictionaries are (or are not)? Yes [] No []

30. Have you ever been taught how to use a dictionary? Yes [] No []

31. Overall, you are satisfied with your ED:

Agree [] Strongly agree [] Don't know [] Disagree [] Strongly disagree []

32. Are you aware of the fact that electronic dictionaries allow you to double-click on any word in the definition and look up its meaning? Yes [] No []

33. Have you ever performed any wildcard search, i.e. typing '*ism' to find all the entry words in the dictionary ending with "ism"? Yes [] No []

34. Do you wish that future electronic dictionaries would be, once installed on computers, automatically updated through the Internet for an additional payment?

Yes [] No []

35. Use the box below to make any other comments or suggestions on the electronic dictionaries you use or own.