UvA-DARE (Digital Academic Repository)

Empirical research on dictionary use in foreign-language learning: survey and discussion

Hulstijn, J.H.; Atkins, B.T.S.

Publication date

1998

Published in

Using dictionaries: studies of dictionary use by language learners and translators

[Link to publication](#)

Citation for published version (APA):

Hulstijn, J. H., & Atkins, B. T. S. (1998). Empirical research on dictionary use in foreign-language learning: survey and discussion. In B. T. S. Atkins (Ed.), *Using dictionaries: studies of dictionary use by language learners and translators* (pp. 7-19). (Lexicographica. Series maior; No. 88). Niemeyer.

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Empirical research on dictionary use in foreign-language learning: survey and discussion

Abstract

This paper begins with a brief survey, in the form of a classified bibliography of research into dictionary discussion follows of the type of research required in order to increase one's insight into the cognitive process involved in using a dictionary; the principal factors which affect the outcome are listed. Two sample research design are outlined. The objective of such studies is given as setting the scene for a new generation of electronic dictionaries, optimally customizable by users according to their individual look-up habits and linguistic needs.

1. Survey

The subject of dictionary use is very much alive today, as is evidenced by the numerous scholarly papers devoted to it. In order to bring up to date the survey by Bogaards (1988), a search of the literature was conducted, starting from the *Linguistics and Language Behavior Abstracts*, San Diego, California (LLBA) and thereafter tracing publications referred to in the papers listed there. This brought to light some fifty published papers reporting on empirical investigations in which the dictionary was involved in one way or another. The studies identified were classified under seven headings, according to the aspects of dictionary use covered in each, and are listed here for reference without further comment. In the case of studies whose abstracts appear in the LLBA source, their LLBA entry numbers have been included in the bibliography at the end of this paper. It should be remembered that the studies listed below are not wholly dedicated to the topic under which they are listed (although some are), but they all contain a substantial amount of material relating to that topic.

1.1 The attitudes, needs, habits and preferences of dictionary users

This broad domain covers studies which gather information about dictionary users themselves: what they think about their dictionaries, what they expect from them, what they customarily use them for, and the types of dictionaries they choose for various tasks.

The following articles relate to this topic: Atkins *et al.* (1987); Atkins & Knowles (1987); Atkins & Varantola (*Language Learners Using Dictionaries* in this volume); Baxter (1981); Béjoint (1981); Benbow, Carrington, Johannesen, Tompa & Weiner (1990); Bogaards (1988, 1992); Coviello (1987); Cumming, Cropp & Sussex (1994); De Andrada (1992); Ellis (1990); Gallison, 1983; Hartmann (1982, 1983); Hatherall (1984); Hohne (1991); Houttrout Wouters (1994); Ibrahim & Zalesky (1989); Kernerman (1996); Kipfer (1987); Laufer (1994); Melamed (1994); Nuccorini (1992); Taylor & Chan (1994); Tomaszczyk (1979); Widdows (1991, 1992).

1.2 Text or word comprehension

This type of research focuses on how readers arrive at an understanding of the text they are reading, having regard to the following factors:

- the presence or absence of a dictionary (since that affects the time required for the reading, as well as the comprehension of the text);
- the type of dictionary used: monolingual or bilingual;
- the medium: electronic or print dictionary;
- various factors relating to the text itself, e.g. the frequency or 'difficulty' of the vocabulary, its perceived importance in the understanding of the text, the inferability of the words looked up, etc.);
- lexical aspects of the way in which the dictionary explains the meaning of words, i.e. the entry component or components involved: the style of the definitions, possible restrictions on the defining vocabulary, whether the examples are authentic or composed, etc.).

The *principal dependent variable* being evaluated here is the reader's comprehension either of the text as a whole, or of selected lexical items in the text.

The following articles relate to this topic: Atkins & Varantola (*Monitoring Dictionary Use* in this volume); Aust, Kelley & Roby (1993); Bensoussan, Sim & Weiss (1984); Bogaards (1994, and this volume); Brito (1992); Hulstijn (1993); Hulstijn, Hollander & Greidanus (1996); Laufer (1993); MacGregor & Thomas (1988); Roby (1993); Summers (1988); Tono (1987, 1988, 1989); Walberg & Ling (1985).

1.3 Text or word production

The main research question in this type of research is how language production is influenced by the following factors:

- the presence or absence of a dictionary (since that affects the quality of the text produced);
- the type of reference work used: monolingual dictionary, monolingual thesaurus, or bilingual dictionary;
- the medium: electronic or print;
- lexical aspects of the explanation of word usage found by the reader in the work consulted.

The variable being evaluated here is the proportion of errors in a written task resulting from misinterpretation of the reference information.

The following articles relate to this topic: Ard (1982); Atkins *et al.* (1987); Atkins & Knowles (1990); Atkins & Varantola (*Language Learners Using Dictionaries and Monitoring Dictionary Use*, both in this volume); Hatherall (1984); Herbst, (1985); Huang (1985); Laufer (1992, 1993); Meara & English (1988); MacGregor & Thomas (1988); Müllich (1990); Nesi (1994); Nesi & Meara (1994); Nesi (this volume); Neubauer (1985); Nuccorini (1994).

1.4 Vocabulary learning

This category contains studies on vocabulary learning, both incidental to other tasks and as a specific objective in itself, and covers:

- incidental vocabulary learning through the use of a dictionary to facilitate reading or writing in a foreign language, taking account of:

- the type of dictionary (monolingual or bilingual);
- the medium (electronic or print);
- lexical aspects of the explanation of word usage found by the reader in dictionary consulted, etc.
- specific language learning strategies, asking such questions as:
 - what strategies do L2 learners use to increase their vocabularies?
 - when do learners use a dictionary for that purpose?
 - to what extent do learners exhibit individual differences in dictionary use (e.g. the learning style)?

The variable being evaluated here is the retention by the dictionary user of facts about expressions: their meaning, their syntactic properties, etc.

The following articles relate to this topic: Bialystok (1983); Bogaards (1991); (1994); Hulstijn, Hollander & Greidanus (1996); Lupescu & Day (1993); Summers (1994).

1.5 Dictionary-related performance in testing

Studies in this area examine the relationship between L2 learners' performance in L2 reading tasks and their use of dictionaries during the tasks, in an attempt to determine if the use or non-use of the dictionary affects the reliability and validity of language tests.

The following articles relate to this topic: Bensoussan (1983); Nesi & Meara (1991).

1.6 Teaching dictionary skills

This type of research pertains to the effectiveness of pedagogical programmes, teaching materials in the teaching of dictionary skills. The variable being evaluated here is proficiency in dictionary use.

The following articles relate to this topic: Atkins *et al.* (1987); Atkins & Knowles (1990); Atkins & Varantola (*Monitoring Dictionary Use* in this volume); Barone (1979) (1994).

1.7 Critical comparisons and reviews of dictionaries

Strictly speaking, this category does not belong to the domain of empirical studies on dictionary use. However, some reviews which compare the performance of two or more dictionaries do so by evaluating samples of dictionary entries, and often include showing credits for features investigated. Since such investigation involves direct consultation of dictionaries by the experts reviewing the works, we include these studies here.

The following articles relate to this topic: Bogaards (1995, 1996); Carter (1989); Gorman & Gorbahn (1989); Herbst (1996); Fillmore (1989); Jansen *et al.* (1994); MacFarquhar & Richards (1983); Nesi (this volume).

2. Discussion

In this section we outline some ideas for making research into dictionary use more critical and systematic, by using a theory-based approach, in order to gain more insight into the cognitive process involved when a dictionary is used; the ultimate objective of this is

day to create dictionaries, electronic of course, whose design and contents are rich and flexible, and which are open to extensive adaptation by users, according to their various needs and the different ways in which they use their dictionaries. This section owes much to Bogaards (1995) and Hartmann (1987, 1995), whose influence we gratefully acknowledge. Atkins (1996) gives some idea of one such dictionary might contain and how it might function.

We do not concern ourselves with research into reading, writing or language learning *per se*, nor with market research, but with research which aims at bringing the dictionary to the user (how can the dictionary best serve its users' needs?) and bringing the user to the dictionary (how can people be made better dictionary users?).

2.1 Motivation for empirical research

Looking at dictionary use from the perspective of language learners, Bogaards (1995) makes the following relevant points:

- learners do not like using a dictionary;
- learners do not know how to use the dictionary;
- dictionaries are too difficult for learners;
- dictionary use hinders reading comprehension.

On the other hand lexicographers, looking at dictionary use from a different point of view, have been known to complain that users do not use the wealth of information that the dictionary offers.

These contrasting perspectives illustrate the dilemma that faces us. The traditional print dictionary cannot be perfect; it can never be ideally suited to each individual user's needs, language skills, world knowledge, intelligence and preferred look-up methods. (One clear-cut example of an insoluble problem of this type is the situation of the bi-directional bilingual dictionary, created for users of two languages, in which each entry must meet the need both of the encoding source-language speaker and the decoding target-language speaker.) Recent years have seen the advent of bigger and more specialized dictionaries for various categories of users (for instance, the various advanced learners' dictionaries of English, Longman's Language Activator for language production, etc.), and the production of electronic dictionaries and other electronic aids. These developments have contributed little to relieve the situation. How can users improve their dictionary skills? And how can dictionaries be made more useful for their users? If this is to come about, much more information is needed about the way in which people actually use their dictionaries.

Technological development has, however, affected the dictionary scene: the dictionary is losing its independence, as it is more and more frequently integrated into larger information systems which can include spelling checkers, grammars, and encyclopedias, among other resources. Professional dictionary users can handle these new types of dictionary reasonably well, and relatively simple questionnaires elicit at least some information about how dictionaries can be improved for such users. These techniques are however suspect at the best of times (people notoriously answer questionnaires in a way which projects an acceptable image of the respondent), and in any case they are not feasible when dealing with non-professional dictionary users, that is, those who are not translators, professional writers, language teachers, academics, lexicographers, etc. More empirical research is needed in this area, to find out exactly the nature of the problems that beset the non-professionals.

2.2 Some general questions

Dictionary use is a subtle problem-solving activity involving many factors. For instance, cannot easily determine whether, for a given task, the use of a monolingual dictionary is or worse than the use of a bilingual dictionary. The effectiveness of either depends on many factors: *alia*, the kind of lexical item involved, the context it is found in, and the user's knowledge of L2, as well as his or her metalinguistic proficiency and inferencing skills. Thus the empirical research which compares the use of monolingual and bilingual dictionaries aboard, without taking account of such variables, cannot be relied upon. The situation is an interactive, iterative approach, in order to determine eventually what types of information learners need what types (monolingual or bilingual) of information about what types of linguistic units for assistance with what types of linguistic tasks?

We find ourselves today in an age of information technology in which it is easy to be overwhelmed by huge masses of information. There are two contradictory reactions to this situation, leading to two diametrically opposed solutions.

The first course advocates that no information should be withheld from an proponents of this approach argue that everyone should have access to all the information available, but should be taught how to handle this avalanche of complex information, develop strategies in order to exploit it to the full in their individual circumstances.

The second course advocates that people should not be offered large quantities of information until they can make use of it, but should rather gain access to facts on a "need to basis. Routines should be set up after careful planning, in order to lead people quickly to the information they seek, and to avoid the distraction of large amounts of irrelevant detail.

The relative efficiency of these approaches to information access is highly relevant to the use of dictionaries by non-professional users. Research must address the question of how complex dictionary information can be optimally made available to such users. So the best dictionary is undoubtedly a human dictionary, in the form of an encouraging knowledgeable parent, teacher, or colleague. The reason for this is that a good dictionary instinctively assesses the situation and tailors the information to the knowledge and needs of the enquirer. Fine-tuning comes from subsequent interaction of user and dictionary.

In contrast, there is not much interaction between the language user and the dictionary. However careful the lexicographer, and skilled the user, by its very nature having to be all things to all users, the print dictionary usually offers either too little or too much information. With the advent of computerized dictionaries, however, straightforward interaction is now possible between the language user and the dictionary. Such interaction can often be objectively monitored by the computer, and appears to be an ideal area for research.

2.3 Research design and planning

For any piece of research to be valid, the operation studied must be analysed in enough and systematically enough, for the various factors which affect its outcome to be isolated and identified; the investigation must then be structured in such a way as to ensure that the factor to be studied is as far as possible the only variable in the experiment.

How can one investigate such a subtle and complex activity as dictionary use? We suggest that studies carried out in this technological age should take account of the following points:

- Expert behaviour is a good starting point for devising research questions. When a language learner consults a teacher, the "experts" in this human dictionary consultation scenario are (i) the intelligent language user/learner (an expert human information seeker) and (ii) the good language teacher (an expert human information provider).
- The interaction between seekers and providers of (lexical) information involves many inter-related variables (linguistic, psychological, pedagogical). These must be painstakingly teased out, and tasks devised in which only one factor is variable in any given operation. The emphasis must be on a *systematic* manipulation of these variables. Thus a one-shot study will not do the job; a series of investigations, planned as a whole, is required, with specific "switching" of the variables listed below.
- Recent technological developments offer researchers in many fields the opportunity to revise and improve their methods: studies in dictionary use may certainly benefit from these new tools, both in ensuring a more objective approach, and in monitoring the activities studied.

2.4 Variables in the use of L2 dictionaries

The following (of which some were adapted from Atkins *et al.* 1987) may serve as a start-up list of variables in the dictionary use scenario:

1. The user's "sophistication" (general educational level, reading, writing and inferencing skills).
2. The user's proficiency in the foreign language.
3. The user's understanding of dictionary metalanguage.
4. If actual dictionaries are involved, the user's familiarity with the dictionary or dictionaries being used in the task.
5. The user's knowledge of the subject matter of the text being understood, translated, read, written about etc. for the purposes of the investigation.
6. The format and type of the specific task (written or spoken; translating or comprehending, etc.), including any time limits imposed.
7. The level of difficulty of the task for the subjects carrying it out.
8. The language (L1 or L2) in which the information is sought or provided.
9. The type of linguistic unit involved (e.g. content or function word), the linguistic information (semantic, grammatical, orthographic, encyclopedic etc.) sought about that unit, and the linguistic and cultural distance between L1 and L2. (Linguistic and cultural distance tends to be reflected in the proportion of lexical items more or less easily "translatable" between the languages involved.)
10. The medium in which the dictionary information is presented (print or electronic).
11. The type of dictionary or dictionary entry used (monolingual, bilingual, "hybrid", etc.);
12. The way in which the information is presented in the dictionary or dictionaries being used: classification, layout, metalanguage, abbreviations, typeface conventions etc.
13. The source of dictionary information available to individuals participating in the investigation: actual dictionaries or "cited" entries; moreover, the latter may either be extracted from a published dictionary or composed for the purposes of the test.

14. The adequacy of coverage of a dictionary vis-a-vis the actual tasks involved (i.e. v not the information sought actually is to be found in the dictionary or dictionaries). To summarize the above: variables 1 through 5 relate to the dictionary user; variable 6 to the task itself; variables 7 through 9 to both the user and the task; and variables 10 through 14 to the dictionary material used in the investigation.

2.5 Methodological recommendations

It is suggested that any new investigation might benefit from using the above as a set of factors to be taken into account, if all but one are to be neutralized so that a single factor may be isolated and studied. The following recommendations may be helpful, but constitute a starting point in the detailed planning of dictionary use research:

Subject profiling

- Specify clearly the criteria for subject selection in terms of age, educational level, linguistic knowledge, inferencing skills etc., taking account of variables 1 through 9. Metalinguistic knowledge and inferencing skills can be assessed by tasks devised for this purpose, or estimated on participants' educational and professional experience, etc.
- Specify clearly subjects' L2 proficiency, especially their knowledge of vocabulary. Pre-tests to check this and selecting subjects accordingly. It is rarely if ever possible to have absolute control over the extent of the subjects' L2 vocabulary. If this is crucial to the test, consider using pseudo-words (of which no subject can possibly have preknowledge), as was done for instance in the study by Hulstijn (1993). For a comprehensive discussion of using artificial linguistic materials in empirical research on learning and language use, see Hulstijn (1997).

Task description

- Clearly specify the task to be performed by the subjects. Subjects must be explicitly informed about the goals of their reading/writing/translating etc. activity and about the conditions under which they have to perform their task (e.g. in terms of time and quality).
- Give instructions on the carrying out of the tasks in the mother tongue of the subjects.

Methodology and results

- Try out every question informally on several test subjects before finalizing even a draft of the questionnaire: it is hard for the deviser of the tasks to identify all possible interpretations by the subjects, inadvertent distractors in the questions, and possible skewing of the results.
- Once the tasks are fixed, a pilot study involving every aspect of the final investigation is advisable.
- When coding subjects' responses, conduct separate analyses for each linguistic category (for each type of linguistic unit consulted) and for each type of information (orthographic, etc.) sought.

2.6 Elicitation techniques

Electronic or print dictionaries may be involved in dictionary use research, and each type has its advantages and disadvantages.

Electronic dictionaries are not familiar objects to many subjects, and their use may interfere with the results of the investigation, unless great care is taken to ensure that the subjects form a homogeneous group along the axis of "computer literacy". However, when it comes to monitoring dictionary use the computerized dictionary offers notable advantages. It can be designed to provide either unrestricted or restricted information (with stepwise access, using a HyperCard-type organization). In this type of program, the computer will unobtrusively keep track of everything the subjects do, including the time devoted to each operation, by making so-called log files, which can later be coded and analyzed; this technique is described, for example, in Hulstijn (1993) and was used in testing the COMPASS¹ dictionaries. Thus, the principal advantage of computer-controlled investigations is that they produce a complete record of subjects' dictionary use, and by unobtrusive on-line monitoring remove much of the danger of the observer affecting the experiment.

The use of print dictionaries may also be recorded in detail, for later analysis. Questionnaires (cf. those shown in Atkins & Varantola's *Monitoring Dictionary Use* in this volume), and "think-aloud" protocols and other types of self-recording (cf. Varantola's *Translators and their Use of Dictionaries* in this volume) may be used in an effort to discover the skills and strategies deployed by the person using a print dictionary. If, however, the entry information is to be manipulated for the purpose of the experiment, paper dictionary entries must be created for the investigation, in order to provide only the entries needed for the task being assessed, and this is considerably more cumbersome than producing electronic pseudo-print entries.

Examples of research using both types of dictionary, electronic and especially contrived paper dictionaries, are proposed in the next section.

2.7 Model investigations

In this section two investigations are described in order to illustrate the various points made in the preceding sections. It should be noted, however, that in order to cover as many aspects of the topic as possible, these samples have intentionally been made far too complex to be realistic. Initial investigations should have a much more modest design than those outlined here.

2.7.1 Sample investigation #1

In this example, variables 1, 2, 9 and 11 in the list above are being manipulated, viz. the educational level and L2 proficiency of the subjects, the linguistic units involved, and the type of dictionary used. All other potentially relevant variables must of course be held constant. The model investigation may be summarized as follows:

Empirical Research on Dictionary Use

Text type, task goal, and task conditions

"A friend of yours has recently moved to a new apartment. She has written a letter in (*the subject's L1*) in which she gives an account of how she found the apartment, what repairs were necessary and the exciting events of the day of her move. She has asked you to translate the letter into (*the subject's L2*) because she doesn't know that language but wants to send the letter to a friend who does not speak (*the subject's L1*). Translate the letter as precisely as you can. Use the dictionary always unless you feel absolutely sure about the translation of a word or phrase. You may take as much time as you want."

Linguistic units of investigation

20 target words, consisting of 10 content words which can and 10 content words which cannot be directly translated from L1 into L2.

Dictionary information

This model involves the use of two print dictionaries. Half of the subjects carry out the task with the aid of a large, unabridged dictionary containing extensive information (sentences; grammatical; examples of word use). The other half of the participants use an abridged dictionary giving little information but adequate vocabulary coverage for the task.

Subjects

There are four subject groups (age range 18-30) classified on the grounds of:

- educational level low *versus* high (to be specified);
- L2 proficiency intermediate *versus* high (to be specified).

Half of each of the four subject groups perform the translation task with the unabridged dictionary, the other half with the abridged one.

Principal dependent variables to be evaluated

The number of correctly translated words and number of dictionary consultations for each of the four types of lexical items, for each of the two dictionary conditions, and for each of the four subject groups.

Research questions

The results when analysed should give information about the effect which the following factors of investigation have on the dictionary use process:

- translatability of linguistic units: high *versus* low;
- type of dictionary: extensive *versus* limited information;
- educational level of dictionary users: low *versus* high;
- L2 proficiency of dictionary users: intermediate *versus* advanced.

¹ COMPASS: Adapting Bilingual Dictionaries for Online COMPrehension ASSistance, an EC-funded project (LRE 62-080: DG-XIII).

2.7.2 Sample investigation #2

In this investigation, the electronic dictionary offers several alternative routes to the information sought, by means of a stepwise presentation of nested information in response to a request.

Research question

Which access route is best for which user category?

Task

Subjects read a text containing target words calculated to be unfamiliar to them, and are told that they will subsequently be tested on their understanding of the text.

Dictionary information

The relevant dictionary entries are long, offering extensive information (orthographic, etymological, grammatical, semantic information; selection restrictions, authentic examples of use, etc.²). Three alternatives obtain with regard to access to the dictionary information:

1. The whole entry is simultaneously available (as it is in a normal paper dictionary).
2. The information in the entry is presented in various phases. At each step, users are given two or more options to choose from, and are thus led towards the information they will finally select (whether correct or incorrect), without seeing all the rest of the information which the entry contains.
3. The computer offers preliminary customization by users of the type of information offered, and users work using their own menus.

Subjects

Various subject groups can be envisaged, differing in L2 proficiency and experience in (conventional) dictionary use, ranging from novices to experts.

Hypothesis to be tested

Experts will profit more from the types of access numbered (1) and (3) above, whereas the stepwise mode (2) is better suited to novices.

2.8 Conclusion

Until now, empirical research on dictionary use has been rather haphazard. What is needed is a systematic study of the way in which various variables interact when dictionary users consult a dictionary which contains complex information. The main variables whose interaction should be investigated are:

- (a) users' metalinguistic knowledge and inferencing skills;

Empirical Research on Dictionary Use

- (b) users' L2 proficiency;
(c) the kind of linguistic information needed from the dictionary; and
(d) the language in which the information is sought and provided.

A systematic investigation of the interplay of these variables should help us find an answer to the question of what information a dictionary should optimally provide, taking into account factors (a) through (d). The answer to this question will hopefully lead to some reconciliation of two opposing views in current educational thinking: one, the belief that no information should be withheld (people must be taught to deal with the enormous quantity and complexity of that information, by helping them to devise strategies which meet their needs), and the other, the belief that information should be withheld temporarily until people concerned are able to understand it and use it correctly (a "need to know" belief involving leading dictionary users quickly to what they need, with no distractions introduced by irrelevant information). Juggling these two scenarios is the unenviable task of the lexicographer; understanding what's going on in their dictionaries and teaching dictionary users to understand this, and adapt to it, falls to the language teacher. Collaborative effort in dictionary use research, we believe, is the way forward.

Bibliography

Following many entries in the list below is the accession number (AN) in the *Linguistics & Language Behavior Abstracts (LLBA)*, published by Sociological Abstracts Inc., San Diego, California. These have been included to allow readers with access to the LLBA (in electronic or print format) to consult the abstracts.

- Ard, J. (1982). The use of bilingual dictionaries by ESL students while writing. *ITL, Review of Applied Linguistics*, 58, 1-27. AN 8305457.
Atkins, B. T. S. (1996) Bilingual dictionaries: past, present and future. *EURALEX 1996 Proceedings*, M. Gellerstam et al. Göteborg: Department of Swedish, Göteborg University.
— H. Lewis, D. Summers & J. Whitcut (1987) A research project into the use of learners' dictionaries: *The Dictionary and the Language Learner*, (ed.) A. P. Cowie. Tübingen: Niemeyer. pp. 29-43.
— & F. E. Knowles (1990) Interim report on the EURALEX / AILA Research Project into Dictionary Use. In: T. Magay & J. Zigany (eds) *Proceedings of BudaLex '88*. Budapest: Akadémiai Kiadó. pp. 381-390.
Aust, R., M.-J. Kelley, & W. Roby (1993). The use of hyper-reference and conventional dictionaries. *Educational Technology Research and Development*, 41/4, 63-73. AN 9406084.
Barone, R. (1979). On the use of the advanced learner's dictionary of current English. *Rassegna Italiana di Linguistica Applicata*, 11, 1-2. AN 8004840.
Baxter, J. (1980). The dictionary and vocabulary behavior: A single word or a handful? *TESOL Quarterly*, 14/3, 325-336. AN 8205454.
Béjoint, H. (1981). The foreign student's use of monolingual English dictionaries: A study of language and reference skills. *Applied Linguistics* 2/3, 207-222.
Benbow, T., P. Carrington, G. Johannesen, F. Tompa, & E. Weiner (1990). Report on the New C English Dictionary User Survey. *International Journal of Lexicography*, 3/1, 155-203.
Bensoussan, M., D. Sim, & 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, 262-275.
— (1983). Dictionaries and tests of EFL comprehension. *English Language Teaching Journal*, 37/4, 345. AN 8406030.
Bialystok, E. (1983). Inferencing: Testing the "Hypothesis-Testing" hypothesis. In: H. W. Seliger & N. Long (eds.), *Classroom oriented research in second language acquisition*. Rowly, Mass: Newbury House. 104-123.
Blok, H. (1994). Het woordenboek gebruiken: Een kunstje? De praktijk van het basisonderwijs. [Dictionary use: A piece of cake? The practice of instruction in elementary schools] *Levende Talen*, 490, 276-279. 9409758.
Bogaards, P. (1985). Een vergelijking van het gebruik van twee woordenboeken door leerlingen van het a [A comparison in the use of two dictionaries by secondary-school students.] In G.E. Booij et al. (eds.) *Corpusgebaseerde Woordanalyse. Jaarboek 1985* Amsterdam: Vrije Universiteit. 17-19.

² This description fits only the as-yet-unpublished dictionary of the future! However, such entries may be compiled for the purpose of the investigation.

- (1988). A propos de l'usage du dictionnaire de langue étrangère. [On the use of the foreign-language dictionary.] *Cahiers de Lexicologie*, 52/1, 131-152. AN 8903583.
- (1991). Dictionnaires pédagogiques et apprentissage du vocabulaire. [Pedagogical dictionaries and vocabulary learning.] *Cahiers de Lexicologie*, 59/2, 93-107. AN 9205416.
- (1992). French dictionary users and word frequency. In: EURALEX '92 Proceedings, (eds.) H. Tommola *et al.* Tampere: Department of Translation Studies, University of Tampere, 51-59.
- (1994). Tuning the dictionary to the skills of intermediate learners. In G. Henrici & E. Zöfgen (eds.), *Fremdsprachen Lehren und Lernen*, vol. 23 (pp. 192-205.). Tübingen: Gunter Narr.
- (1995). Dictionnaires et compréhension écrite. [Dictionaries and reading comprehension.] *Cahiers de Lexicologie*, 67, 37-53.
- (1996). Dictionaries for learners of English. *International Journal of Lexicography*, 9/4, 277-320.
- Brito, E. V. (1992). Leitura de textos didáticos: Uma abordagem pragmática [Reading didactic texts: A pragmatic approach]. *ESpecialist*, 13/1, 93-102. AN 9308663.
- Carter, R. (1989) Review of LDOCE and COBUILD. *International Journal of Lexicography*, 2/1, 30-43.
- Coviello, G. (1987). Il dizionario oggi: Due gruppi di studenti messi a confronto su un "oggetto" molto discusso. [The dictionary today: two groups of students confront a much-debated issue.] *Rassegna Italiana di Linguistica Applicata*, 19/1, 109-129. AN 8706248.
- Cumming, G., S. Cropp, & R. Sussex (1994). On-line lexical resources for language learners: Assessment of some approaches to word definition. *System*, 22/3, 369-377. AN 9500387.
- De Andrade, M. A. F. (1992). Dicionários: Meta, atalho ou mito? [Dictionaries: Goal, obstacle, or myth?] *ESpecialist*, 13/1, 65-74. AN 9308253.
- Diab, T. A. A. (1990). The role of dictionaries in ESP, with particular reference to student nurses at the University of Jordan. Dissertation University of Exeter. Dissertation abstracts International A: The Humanities and Social Sciences, 50/10, April, 3215-A. AN 9101695.
- Fillmore, Charles J. (1989) Two Dictionaries. *International Journal of Lexicography*, 2/1, 57-83.
- Fischer, U. (1994). Learning words from context and dictionaries: An experimental comparison. *Applied Psycholinguistics*, 15/4, 551-574. AN 9502373.
- Gallison, R. (1983). Images et usage du dictionnaire chez des étudiants (en langue) de niveau avancé. *Études de linguistique appliquée*, 49, 5-88.
- Hartmann, R.R.K. (1982) Das zweisprachige Wörterbuch im Fremdsprachenerwerb. Studieren zur neuhochdeutschen Lexikographie II. (ed.) H.E. Wiegand. *Germanistische Linguistik*, 3-6/80. 73-86. Hildesheim: Georg Olms.
- (1983). The bilingual learner's dictionary and its uses. *Multilingua*, 2/4, 195-201. AN 8407034.
- (1987). Wozu Wörterbücher? Die Benutzungsforschung in der zweisprachigen Lexikographie. [Why dictionaries? Usage studies in bilingual lexicography.] *Lebende Sprachen*, 32/4, 154-156. AN 8804040.
- (1995). Pedagogical lexicography: some desiderata. In R. Dirven & J. Vanparys (eds.), *Current approaches to the lexicon* (pp. 405-411). Frankfurt am Main: Peter Lang.
- Hatherall, G. (1984). Studying dictionary use: some findings and proposals. In R.R.K. Hartmann (ed.), *LEXeter 83 Proceedings*. Tübingen: Niemeyer. 183-189.
- Hausmann, F.J. & A. Gorbahn (1989) COBUILD and LDOCE II: A comparative review. *International Journal of Lexicography*, 2/1, pp. 44-56.
- Herbst, T. (1985). Von Fehlern, die vermeidbar waren. Ein weiteres Argument für mehr Wörterbucharbeit im Englischunterricht. (Errors which could have been avoided: An additional argument for more instruction on dictionary work in English) *Bielefelder Beiträge zur Sprachlehrforschung* 14, 1-2 & 236-248. AN 8707465.
- (1996) On the way to the perfect learners' dictionary: a first comparison of OALD5, LDOCE3, COBUILD2 and CIDE. *International Journal of Lexicography*, 9/4, 321-357.
- Hohne, S. (1991). Die Rolle des Wörterbuchs in der Sprachberatung. Eine Sekundaranalyse zur Wörterbuchbenutzungsforschung. [The role of the dictionary in linguistic consultation. A secondary analysis of dictionary use research.] *Zeitschrift für Germanistische Linguistik*, 19/3, 293-321. AN 9204187.
- Houtman, K., & G. Wouters (1994). "Een boek waar alles in staat!" Gesprek met leerlingen over woordenboeken en een proef op de som. ("A book that's got everything in it!" A conversation with students about dictionaries and a test.) *Levende Talen*, 490, 306-310. AN 9410019.
- Huang, G. (1985). The productive use of EFL dictionaries. *RELC Journal*, 16, 54-71. AN 8700253.
- Hulstijn, J.H. (1993). When do foreign-language readers look up the meaning of unfamiliar words? The influence of task and learner variables. *The Modern Language Journal*, 77, 139-147. AN 9308491.
- (1997). Second-language acquisition research in the laboratory: possibilities and limitations. In: J.H. Hulstijn & R. DeKeyser (eds.), *Testing SLA theory in the research lab. Studies in Second Language Acquisition*, 19/2, 131-143.
- M. Hollander, & T. Greidanus (1996). Incidental vocabulary learning by advanced foreign-language students: The influence of marginal glosses, dictionary use, and reoccurrence of unfamiliar words. *The Modern Language Journal*, 80/3, 327-339.
- Ibrahim, A.H., & M. Zalesky (1989). Enquête: l'usage du dictionnaire. [Survey: The use of the dictionary.] *Français dans le Monde*, 29, Supplément, Aug-Sept. 24-30. AN 9001894.
- Jansen, J., J. P. Mergeai & J. Vanandroye (1987) Controlling LDOCE's controlled vocabulary. The 1 and the Language Learner, (ed.) A. P. Cowie. Tübingen: Niemeyer, 78-94.
- Kemmerman, L. (1996). English learners' dictionaries: How much do we know about their use? In: E 1996 Proceedings, (eds.) M. Gellerstam, J. Järborg, S-G. Malmgren, K. Norén, L. Rogström & Papmehl. Göteborg: Department of Swedish, Göteborg University.
- Kipfer, B. A. (1987). Dictionaries and the Intermediate Students: Communicative Needs and the De of User Reference Skills. In: *The Dictionary and the Language Learner* (ed.) A. P. Cowie, *Lexic Series Major 17*. Tübingen: Niemeyer, 44-54.
- Laufer, B. (1992) Corpus-based as against lexicographer examples in comprehension and product words in EURALEX '92 Proceedings, (eds.) H. Tommola *et al.* Tampere: University of Tampere.
- (1993) The effect of dictionary definitions and examples on the use and comprehension of new v hiers de Lexicologie 63/2: 131-142.
- & L. Melamed (1994). Monolingual, bilingual and "bilingualized" dictionaries: Which are more for what and for whom? EURALEX 1994 Proceedings, (eds.) W. Martin *et al.*, Amsterdam Universiteit, 565-576.
- Lupescu, S., & R. R. Day (1993). Reading, dictionaries, and vocabulary learning. *Language Learn* 263-287. AN 9308517.
- MacFarquhar, P. D. & J. C. Richards (1983). On dictionaries and definitions. *RELC Journal*, 14/1, AN 8501547.
- MacGregor, S. K., & L. B. Thomas (1988). A computer-mediated text system to develop comm skills for hearing-impaired students. *American Annals of the Deaf*, 133/4, 280-284. AN 8901902
- Müllich, H. (1990). "Die Definition ist blödi!" Herübersetzen mit dem einsprachigen Wörterbuch. zösische und das englische Lernwörterbuch in der Hand der deutschen Schüler ("That definition i Tübingen: Niemeyer.
- Meara, P. and F. English (1988) Lexical Errors and Learners' Dictionaries, ERIC ED 654 321, Unive lege Swansea: Centre for Applied Language Studies Group.
- Nesi, H. (1994). The effect of language background and culture on productive dictionary use. EURAI Proceedings, (eds.) W. Martin *et al.*, Amsterdam: Vrije Universiteit, 577-585.
- & P. Meara (1991). How using dictionaries affects performance in multiple-choice EFL tests. *Re Foreign Language*, 8/1, 631-643. AN 9402515.
- & P. Meara (1994). Patterns of misinterpretation in the productive use of EFL dictionary de System, 22/1, 1-15. AN 9407377.
- Neubauer, F. (1985). Auf der Spur des "unbekannten Wesens": der DaF Wörterbuchbenutzer. (On th the "unknown creature": the German as a second language dictionary user.) *Bielefelder Be Sprachlehrforschung*, 14/1-2, 216-235. AN 8707473.
- Nuccorini, S. (1992) Monitoring dictionary use. In EURALEX'92 Proceedings, (eds.) H. Tommol Tampere: University of Tampere, 89-102.
- (1994). On dictionary misuse. EURALEX 1994 Proceedings, (eds.) W. Martin *et al.*, Amsterd Universiteit, 586-597.
- Roby, W. B. (1993). Glosses and dictionaries in paper and computer formats as adjunct aids to the Spanish texts by university students. Dissertation University of Kansas. Dissertation Abstract tional, A: The Humanities and Social Sciences, 53/9, March, 3182-A. AN 9400343.
- Summers, D. (1988). The role of dictionaries in language learning. *Vocabulary and language learni R. Carter & M. McCarthy*, London: Longman. 111-125.
- Taylor, A., & Chan, A. (1994). Pocket electronic dictionaries and their use. In: EURALEX 1994 Proc (eds.) W. Martin *et al.*, Amsterdam: Vrije Universiteit. 598-606.
- Tomaszczyk, J. (1979). Dictionaries: Users and uses. *Glottodidactica*, 12, 103-119. AN 8200476.
- Tono, Y. (1987) Which Word Do You Look Up First? A study of Dictionary Reference Skills. Un M Ed. thesis, Tokyo Gakugei University. [includes report on testing of EFL learners' dictionary t
- (1988) Exploring the Cognitive Strategies of Dictionary Use: A Study of EFL Learners' Idiom Operations. *Bulletin of the Kanto-Koshin-Etsu English Language Education Society*, No. 2 Janua
- (1989) Can a dictionary help you read better? On the relationship between EFL learners' diction ence skills and reading comprehension. *Lexicographers and their Works* (ed.) G. James, Exeter I Studies, 14, 192-200.
- (1991) A Good Dictionary User: What makes the difference? Recent Studies on English Language (eds.) K. Ito, K. Kantatani & T. Noda. Yumi Shobo.
- (1992) The Effect of Menus on EFL Learners' Look-up Processes. *LEXIKOS 2*
- Walberg, H. J., & T. S. Ling (1985). Correlates of reading achievement and attitude: A national as study. *Journal of Educational Research*, 78/3, 159-167. AN 8802881.