

## Replication Study on Dictionary Consultation

Regina Petrylaitė, Tatjana Vėžytė

**crossref** <http://dx.doi.org/10.5755/j01.sal.0.22.4524>

**Abstract.** The aim of the paper is twofold: 1) to investigate studies on dictionary use and 2) to compare the results of two surveys relating to students' preferences and habits of dictionary use conducted in 2007 and 2012.

An overview of studies on dictionaries comprises literature on dictionary types (both electronic and printed) and the comparison of dictionaries in the way they influence users' activities, revealing the significance of the dictionary as a source of information, suggesting some benefits and drawbacks of different types of dictionaries. Moreover, recent studies on the development of dictionaries as information tools discuss a different approach applied in devising internet dictionaries. Users' needs tend to be an underlying binding common feature in recent studies on online lexicography. More research is needed to better understand the user needs and demands when the online tool is going to become fully customisable, enabling the user to create and change his/her profile.

The paper is based on the analysis and comparison of two surveys, the findings of which demonstrate the students' preference for electronic reference sources in order to efficiently comprehend specialised texts and accomplish related tasks.

**Key words:** *digital shift, online dictionary, monolingual dictionary, bilingual dictionary, reference, online search.*

### Introduction

The meaning of the word "dictionary" has been stretched over the last decade. Previously "dictionary" was defined as "a book containing the words of a language alphabetically arranged, with other meanings" (Webster's New Dictionary, 1990). It contains information on any field of knowledge, which, with the development of information technologies, can be reached in a variety of ways, not only by consulting stationary dictionaries. While printed dictionaries, as well as typical CD or DVD dictionaries, sort entries alphabetically and allow the user to browse in sequence, online dictionaries can provide direct access to a word and all additional related information. Therefore, the definition of the dictionary has also widened:

*"It is a book, optical disc, mobile device, or online lexical resource containing a selection of the words of a language, giving information about their meanings, pronunciations, etymologies, inflected forms, derived forms, etc., expressed in either the same language or another language; lexicon; glossary" (dictionary.com).*

In the study "Changing Skills of Dictionary Use" (Petrylaitė, Vaškeliėnė, Vėžytė, 2008), the authors reviewed the potential of dictionaries and their types, analysed research related to different types of dictionaries, ranging from monolingual to hybrid/bilingualised. The accumulated data from the studies on dictionary use provided some insights:

- 1) The use of monolingual target language dictionaries was emphasised, since they contributed to the user's learning to comprehend and think in the target language.
- 2) Due to easy and quick search, accessibility of large amounts of data, and interactivity, computer-based dictionaries were gaining immense popularity among users.

In order to find out students' habits and preferences in dictionary use, a survey was carried out. The sample comprised 88 students of ESP (English for Specific Purposes), who were exclusively first year students of the Faculty of Informatics at Kaunas University of Technology. The findings of the survey related to both offline and online dictionaries (type of dictionary, frequency of use, reasons for looking up words, difficulties encountered when using dictionaries, etc.).

The results of the survey revealed major trends in dictionary use. First, to the majority of respondents, electronic dictionaries had more advantages over the printed ones. Second, despite the students' proficiency level, the most frequently consulted dictionaries were bilingual ones (both printed and electronic). Third, the majority of respondents considered themselves to be efficient dictionary users.

The object of the present study is to analyse trends in the studies on dictionaries and their use that are currently prevailing and changes in researchers' focus on the issue observed over the period of five years.

**Research aim:** to describe the digital shift in lexicography and ESP students' preferences and habits of dictionary use.

**Research objectives:**

- 1) To view trends in research into dictionary types and use of dictionaries;
- 2) To compare the results of two surveys relating to students' preferences and habits of dictionary use conducted in 2007 and 2012.

**Research methods:**

- 1) Systematic literature analysis;
- 2) Survey, including a questionnaire, analysis;
- 3) Comparative analysis.

## Digital Shift in Lexicography

In the literature review included in the article “Changing Skills of Dictionary Use” (Petrylaitė et al., 2008), the focus was centered on major research into types of dictionaries: monolingual, bilingual, bilingualised, as well as the notion of electronic tools. Reports on the preferences in the use of dictionaries were extensively reviewed.

A considerable amount of literature on dictionaries and dictionary use became available over the last decade. The studies published vary from empirical ones to those discussing different approaches lexicographers could be undertaking when developing dictionaries:

- 1) Studies conducted to compare and determine the superiority of either printed or electronic dictionaries (Dziemianko, 2010, 2011; Chen, 2010; Kobayashi, 2007; Rylova, 2011; Varantola, 2002).
- 2) Studies on online dictionaries and suggestions for the future development in terms of usefulness and user-friendliness. Recent studies, both empirical and theoretical, analyse and promote different approaches and principles applied in the development of online resources. Users’ needs tend to be an underlying binding common feature in recent studies on online lexicography (Lew, 2011; Fuertes-Olivera, 2011; Almind, 2005; de Schryver, 2003; Campoy Cubillo, 2002; Varantola, 2002; Tarp, 2011; Bothma, 2011; Heid, 2011; Tono, 2011).

### *Printed Versus Electronic Dictionaries*

The development of online dictionaries leads to the obsolescence both of the paper version and of the electronic off-line dictionaries.

Nonetheless, over the last decade, quite a few studies have been done to investigate advantages and drawbacks of paper dictionaries as compared to their electronic counterparts in terms of usefulness during users’ activities. The researchers tend to investigate dictionary use in tasks related to reading in an attempt to determine the relationship between dictionary (both paper and electronic) consultation and vocabulary acquisition. Searching paper dictionaries in order to find the relevant meaning tends to require more effort and thus the looked up words are better retained. However, this view is not supported by all analysts. Some empirical studies do not reveal any significant impact of dictionary form on learning new words. The results of several empirical studies conducted on the issue are presented below.

In her study, Dziemianko (2010) compared the usefulness of a monolingual English learners’ dictionary in paper and electronic form in receptive and productive tasks, and assessed the role of dictionary form (paper and electronic) in the retention of meaning and collocations. The results gained during the test were to the significant advantage of on-line e-dictionaries in both receptive and productive tasks as well as in the retention of both meaning and collocations. In her analysis of the findings, the researcher suggests that higher effectiveness of e-medium can be explained by the way information is accessed and the form words are presented on the computer screen. According to

the author, better vocabulary retention results obtained in the electronic dictionary imply that the ease of look-up and the salience of an entry on the computer screen are more beneficial to the learning process than the effort put into the extraction of relevant information from a paper dictionary. Although a number of visual innovations in printing have been introduced, paper dictionary consultation is more demanding in terms of effort and attention one has to devote in finding relevant information in a long dictionary entry. Dziemianko’s (2010) study results contradict Nesi’s (2000) idea that easily extracted information is easily forgotten. On the contrary, test participants consulting e-dictionaries achieved much better results than those who consulted paper dictionaries both in receptive and productive tasks. However, the repeatedly conducted research by Dziemianko (2011) into the usefulness of dictionaries in paper and electronic version did not prove electronic dictionaries to be more useful for language reception, production and learning, i.e. retention of meaning and collocations. The study was conducted under the same conditions in terms of tasks and samples chosen (the learners were as proficient and as in the first experiment) except for the dictionaries used: in the first experiment COBUILD6 in paper and electronic version while in the repeated one the paper and free online versions of LDOCE5 were employed. According to the author, the free online dictionary might have had too much distracting material in comparison to the well-built e-COBUILD6.

Another empirical study carried out by Chen (2010) investigated the role of dictionary use in target language vocabulary learning in the reading context. The author raised three hypotheses one of which was related to the comparison of electronic and paper dictionaries in terms of their efficiency for vocabulary learning (including vocabulary comprehension and incidental vocabulary acquisition). The test results suggested that there was no significant difference in the efficiency of use of the paper and the electronic bilingual dictionaries, yet the latter showed some advantage over the former in terms of vocabulary retention. It is also noted that the time spent looking up the words in paper and electronic dictionaries differed to the advantage of electronic dictionaries as the consulting of dictionaries was much faster.

The study by Kobayashi (2007) also compared dictionary types used in reading tasks and the number of dictionary look-ups was checked. The researcher noted that the availability of electronic dictionaries encouraged the respondents to look up words without trying to guess or to recall the meaning. When using paper dictionaries the users, on the contrary, tried to guess the meaning from the context at the first reading and looked up the unknown words in paper dictionaries at the second reading. Immediate look-up of the words in the electronic dictionaries may not be beneficial to all users, because language learners are more concerned with finding the translation of the words than trying to understand the whole text.

A group of researchers (Rylova, 2011; AlBulushy, 2012; Varantola, 2002) distinguished the features of non-

electronic and electronic dictionaries. Rylova (2011) listed examples of the most common differences between digital and paper versions of the dictionary and highlighted the difference in the position of collocations and idioms in both media, as well as the difference in visual presentations. In order to facilitate the search, collocations and idioms were placed separately in the electronic dictionary, while in the printed dictionary they were added to the main word in the entry. The differences were also discussed in terms of the presentation of examples, visuals, the position of headwords, labeling (the full forms of labels in the e-medium, and abbreviations in the paper medium). Furthermore, Rylova (2011) differentiated between specific features of different electronic dictionaries: desktop applications, online and mobile dictionaries. Desktop applications often include features for language learning, word memorization; online dictionaries have functions of logging the users' queries thus helping publishers to update the dictionary content whereas mobile dictionaries have the problem of limited space. Likewise, Albulushy (2012) identified a lot of features that are absent in the paper dictionary: a databank, reference book, calculator, speech features, updates and interactive learning functions like irregular verbs, idioms, dialogs, sentence structure, accent correction, and grammar explanations. However, according to Varantola (2002), there have been a number of visual innovations in printing facilitating the search for information, making it easier to spot the subdivisions and information categories.

### ***The Internet as a Medium for Lexicographical e-Tools***

The Internet brought about the inevitable transition from paper and electronic off-line dictionaries to online dictionaries. With rapid development of technologies, digital dictionaries developed for the internet have been gaining complex innovative features. Moreover, the pervasiveness of the Internet allows for easy and fast access to information. According to Lew (2011b), lexicography is undergoing a steady transition to the electronic medium. Therefore, the comparison of electronic and printed dictionaries in order to determine which medium is more effective in users' activities loses relevance. The focus of researchers turns to online reference sources.

The Internet as a medium for dictionaries gave rise to studies of issues relevant to online resources exclusively. Lexicographers are not unanimous in deciding whether new theories are necessary for the development of internet reference sources, or whether it is sufficient to adapt the theories used in developing printed dictionaries to the technical options of the Internet. However, it should be taken into consideration that e-dictionaries need to be developed by using other methods different from those used at the beginning of "electronic age". The old e-dictionary typologies need to be replaced with more informative ones, because only online dictionaries provide quick and easy access to the lexicographical data. It is necessary to consider such features as the process of access to lexicographical data, the introduction of Boolean search, search maximization and minimization. According to Fuertes-Olivera (2011), the lexicographers agree that

online dictionary and other types of lexicographic tools should be presented as utility tools. As he puts it,

*"such products must be planned and compiled afresh, with the aim of meeting users' needs in the light of new technologies made available to practical lexicography"* (Fuertes-Olivera, 2011, p. 101).

Some lexicographers present different typologies of online dictionaries. According to Fuertes-Olivera's (2009) typology, internet dictionaries comprise institutional internet reference works and collective multiple-language internet reference works. The former ones are compiled by institutions may be free or at a price, while the latter ones are usually free as they are compiled by a community of users. Lew (2011a) offered the following target categories of e-dictionaries: general English Language dictionaries, learners' dictionaries, active user dictionaries, diachronic (historical) dictionaries, dictionaries of a certain area, dictionaries of a limited macrostructure, of limited microstructure, glossaries, and onomasiological. He also divided dictionaries into stand-alone, clusters of dictionaries placed on the same website, websites with links to a variety of dictionaries, aggregators (i.e. providing entries of words from unrelated dictionaries).

Online dictionaries embrace many more features that are unavailable in both regular paper and the earliest electronic dictionaries which used to be pure equivalents of the printed ones with the same features as paper dictionaries, including alphabetical order. As Almind (2005, p. 37) puts it:

*"Sadly, there are still publishers who believe that they can publish a proper internet dictionary by converting the digital form of a printed dictionary directly onto the internet and slapping a search engine on top of it."*

In his article on designing internet dictionaries, Almind (2005) stated that designing a printed dictionary and designing an internet dictionary raise a lot of problems, but the designing decisions differ radically. One of the differences in the design is the possibility to control the designing process. In designing paper dictionaries, all the aspects (e.g. formatting of the book, its page layout, fonts, font-sizes) can be controlled, which is impossible when designing internet dictionaries. According to the author, "Web design is very much the art of compromise" (Almind, 2005, p. 38). The author presented the difficulties of web designers in defining the form of internet dictionaries. Although the designer can define individual objects precisely, the interpretation of those individual objects is not predictable as it mostly depends on the differences in hardware. The functionality of internet dictionaries, on the other hand, can be controlled. Almind (2005, p. 39) advised those involved in the designing of internet dictionaries what to focus on; "giving access to powerful search-function is essential to a dictionary's success". According to him, even excellent dictionaries are avoided not due to their content but due to poor user interface, advertising, and slow search engines. He presented a list of users' demands and detailed solutions to the problems, i.e. the ways to meet users' demands related to dictionaries. One of the ways is providing search results in terms of relevancy (in the case of advanced search) and

not in the alphabetical order since alphabetical sorting is irrelevant in many cases. The reason, according to Almind, is that the computer is “much more up to the task of locating complex data structures than the alphabet is” (Almind, 2005, p. 40).

De Schryver (2003) stated that electronic dictionaries would stop functioning as stand-alone products. The tendency to integrate reference sources is already apparent. Studies analysing various aspects of dictionary development focus on such important elements of internet dictionaries as integration with other reference sources, accessibility and space.

Space is unrestricted in online dictionaries. However, Varantola (2002, p. 36) maintained that

*“print dictionaries can blame the dearth of information on space restrictions but lack of space is no excuse for lack of systematic approach”.*

In her study, the author criticised both printed and electronic dictionaries in terms of information overload and their inability to provide systematic access to more specific information. Varantola (2002) stated that electronic dictionaries can benefit from a layered hypertext design. Lew (2011) also claimed that cross-referencing is one of the most important features of modern e-dictionaries that save both users’ time and effort. It can be extensively illustrated by Cubillo’s (2002) article on general and specialised free online dictionaries. The author provided a huge variety of online dictionaries and discussed their inherent features, their advantages over the printed ones in terms of the importance in (autonomous) language learning, simplified look-up process (the word look-up process is filtered and carried out by Boolean search), the possibility to access from one part of the dictionary to another; linking the dictionary to external and/or other types of information as well as multiple dictionary access. The article is a useful resource for both language teachers and LSP (Language for Specific Purposes) students.

The term “e-dictionary” should be enhanced to the “information tool”. Varantola (2002, p. 35) claimed that

*“the future dictionary is rather an integrated tool or a number of tools in a professional user’s toolbox where it coexists with other language technology products”.*

among which she listed encyclopedic sources of reference, different types of corpora, corpus analysis tools. Varantola (2002) also described the compatibility of an integrated dictionary with other tools, which means the possibility to move from one tool to another, to customize the dictionary to match the user profile and individual preferences. This view is supported by a group of researchers who contributed to the book “e-Lexicography” (Tarp, 2011; Bothma, 2011; Heid, 2011).

There is a suggestion to transfer lexicography to the field of computer science and to focus on such features as online access to dictionaries. Heid (2011) argued that, if e-dictionaries are perceived as software tools, their development should be based on the tenets of software design. Usability is a principle taken from computer

science where it is applied in evaluating the effectiveness of a tool for a specific task. Still, it is necessary to develop a system for the personalization of the dictionary content. According to Varantola (2002), the users would then be able to synthesize the information they obtain from the different sources and use the synthesized information as the basis for their own context-dependent decision-making. Tarp (2011) described three possible online dictionary content personalization methods: the interactive (the users will be able to create their own data profile), active (by providing relevant information on the screen, users will be able to create their own articles), and the passive approach, which means the automated tracking of the behaviour of the user seeking for information. Tarp (2011) maintained that the customization of e-dictionaries, i.e. the personalization of e-dictionary access taking customers into account, requires reconsidering such methods of the information technology as: navigation, user profile creation, filtering, adaptive hypermedia metadata markup. He also mentioned that with the help of information technologies it will become possible to provide consumers with the possibilities to create their own e-dictionaries or information tools. According to Bothma (2011), the customisable e-tool will enable the user to create his/her profile. It will be possible to change this profile according to the changing needs as well as get the desired complexity of the data (from synopsis to detailed information). Meanwhile, the system will track down the user’s behavior, and continue adapting the profile and providing information. The data will be marked by complex metadata scheme; links to external sources will also be provided enabling the user to obtain knowledge on demand. Recommendations to the user will be provided by the system, enabling the user or a group of users to create own notes, observations and explanations. This would facilitate lexicographers to constantly update the database.

The Internet as a medium for reference tools allows researchers to conduct studies into dictionary use not only by observing log-files, but also by employing such sophisticated methods as eye-tracking. In the abstract of his study, Tono (2011, p. 124) presented the experiment he had conducted to examine detailed processes of look-up in the microstructure:

*“several variables (the availability of supporting devices such as signposts or menus, different types of grammar codes, positions of target definitions) were carefully controlled to see how look-up behaviour would change in both monolingual and bilingual dictionary interfaces. The findings show that look-up processes within a microstructure are very complex, showing interactive effects among positions of target information within the microstructure, functions of supporting devices, and users’ proficiency levels.”*

Tono’s (2011) study using sophisticated technologies of eye-tracking may allow e-lexicographers and others involved to see what decisions users take when consulting reference material and may serve as an aid to e-lexicographers in designing dictionaries.

## Analysis of Students' Preferences in Dictionary Use

To compare changes in students' preferences and habits of dictionary use within 5 years, a survey was conducted, the pattern of which was identical to the one carried out by Petrylaitė et al. (2008). In the previous study, the sample size was 88 students. Five years later, the second group comprised 72 students. The students involved in both studies were first year students of the Faculty of Informatics at Kaunas University of Technology. The respondents were to answer the questions about paper and online dictionaries (type of dictionary, frequency of use, reasons for looking up words, difficulties encountered when using dictionaries, etc.).

Firstly, the students were asked to answer several general questions about the dictionaries they owned, the reasons for having acquired them and their intentions to purchase any dictionaries in the future. The overall majority of respondents in both studies (91 % and 78 %, respectively) owned a bilingual dictionary. The percentage of students who owned an English monolingual was quite low (31 % and 21 %, respectively). The dictionaries owned by students had in most cases been bought by relatives or were part of the learning material recommended at school. An interesting point to note is that only one respondent from the second study was going to buy a dictionary in the future. In the first study, the percentage of those who were planning to buy a dictionary was slightly higher (about 7 %).

**Table 1.** Comparison of Frequency of Dictionary Use in Printed and Electronic Versions

	Printed version		Electronic version	
	No. of respondents Study 1, 2007	No. of respondents Study 2, 2012	No. of respondents Study 1, 2007	No. of respondents Study 2, 2012
<b>Bilingual:</b> English/mother language	74 %	28 %	78 %	69 %
<b>Monolingual:</b> English-English	8 %	7 %	30 %	20 %
<b>Specialised</b> (e.g. of IT)	3 %	7 %	11 %	4 %
<b>Thesaurus</b>	2 %	3 %	7 %	4 %
<b>General encyclopedia</b>	5 %	2 %	9 %	6 %

The next question was related to the ranking of different types of online and paper dictionaries according to frequency of use. It turned out that in the first and the second studies the proportion of the respondents who preferred bilingual dictionaries to monolingual ones in both offline and online forms was comparable, it is important that in the second study bilingual dictionaries were noted to be preferred yet the frequency of use of online dictionaries

drastically exceeded that of paper dictionaries: 28 % vs 69 %. As concerns bilingual dictionaries, they are

*“typically the primary dictionaries consulted, and monolingual dictionaries are used only after a bilingual dictionary has failed to give a definitive answer” (Varantola 2002, p. 35).*

With the growing use of the Internet on mobile phones, online dictionaries are enjoying considerable popularity among students. The proportion of the respondents identifying the portability of the printed dictionary as the only advantage has fallen from 65 % in the first study to just 36 % in the second study. Online dictionaries are favoured by the respondents because such dictionaries are free, access thereto is fast, a wide range thereof is available on the Web, “some online dictionaries carry out searches in more than one dictionary” and “listening to the pronunciation is preferred to interpreting phonetic symbols”. Hypertextuality and cross-referencing are also ranked high. As advocated by Krajka (2007),

*“due to their wide accessibility for both in and out of class use, fast access, advanced searching opportunities and hyperlinked multimedia content, online reference tools should be promoted as an essential element of the learner’s toolkit, much more readily used than paper dictionaries”.*

**Table 2.** Comparison of Frequency of Consultation in English Dictionaries

	No. of respondents	
	Study 1, 2007	Study 2, 2012
<b>Every day</b>	13 %	19 %
<b>Three/four times a week</b>	51 %	19 %
<b>Once a week</b>	30 %	33 %
<b>Less often</b>	7 %	23 %
<b>Hardly ever</b>	0 %	7 %

Table 2 shows the breakdown of responses by the frequency of dictionary use. Interestingly, there was a considerable decline in the number of respondents who consulted the English dictionary three to four times a week in study 2 as compared to those in study 1 (cf. Petrylaitė et al., 2008).

To answer the question on reasons for looking up words, students were offered several options which were ranked in terms of priority. In both studies the most frequently sought information was the meaning (93 % vs 86 %), followed by spelling (34 % vs 29 %), grammar (22 % vs 27 %), phrasal verbs (16 % vs 18 %), pronunciation (8 % vs 16 %). At the bottom end were idioms (7 % vs 8 %) and collocations (2 % vs 4 %). The results are in line with Scholfield’s (2002) findings, where it is noted that spelling and meaning is information most commonly looked up, with much valuable information in entries such as grammar and collocations, being underexploited.

The questionnaire enabled the investigation of the problems students experienced when looking up words, the first problem mentioned being “definition is not clear”, followed by “word-combination is not given”, “information I need is not given”. In terms of the major problems faced when

consulting the dictionary, the results in both studies were comparable. Surprisingly, twice as many respondents in the second study did not seem to make good use of the example sentences.

**Table 3.** Comparison of the Problems Encountered when Looking up Words in an English-English Dictionary

	No. of respondents	
	Study 1 2007	Study 2 2012
The word is not there	18 %	23 %
Information I need is not given	28 %	31 %
Definition is not clear	58 %	54 %
Entry is too long	24 %	16 %
Examples are not helpful	17 %	37 %
Word-combination is not given	31 %	32 %
Cross-references are necessary	1 %	3 %
Other: sometimes it is very difficult to understand which meaning to choose (not clear from the text)	2 %	8 %

**Table 4.** Comparison of Reasons for Difficulties

	No. of respondents	
	Study 1 2007	Study 2 2012
Lack of familiarity with the dictionary	27 %	25 %
Lack of dictionary skills	22 %	27 %
Unclear layout of the dictionary	30 %	41 %
Too little information given in a dictionary	19 %	18 %

The students were asked to provide reasons for difficulties. The choices “lack of familiarity with the dictionary”, “lack of dictionary skills” and “too little information given in a dictionary” show a similar split in both studies. Interestingly, the figure of those who found the layout of the dictionary unclear rose from 30 % to 41 %.

Replies to the question: “When you find a word you want, how often do you look for its connections with other words?” split as follows: “sometimes” (79 % vs 71 %), “always” (12 % vs 7 %), “never” (9 % vs 22 %). Collocations were even less frequently employed by the students in the second study, which may be explained by such fact that the proficiency level of students entering the university has greatly improved. In the modern world they have more contact with the target language which helps them to master it.

The information derived from the surveys indicates that in both studies the majority of students had received no training in using electronic dictionaries: 59 % and 68 %, respectively. The percentage of students who had received training in using paper dictionaries was considerably higher in the first study than in the second one, namely: 52 % vs 36 %.

When asked whether or not they would benefit from training in the use of different dictionaries, the respondents answered as follows: the majority (44 % vs 42 %) said they did not know, 30 % in both studies said “Yes” and the remaining respondents said “No” (16 % vs 22 %). The results of the second study confirm the students’ awareness of the advantage of having training in dictionary use. As Lew (2011c) puts it:

*“in order to benefit from the achievements of modern lexicography, dictionary users need to be trained how to use the dictionary to solve actual typical problems and questions.”*

## Conclusions

The aim of the paper was to compare changes in students’ preferences and habits of dictionary use within 5 years and to describe the digital shift in lexicography.

An overview of studies reveals that much research was carried out into dictionary use in tasks related to reading in an attempt to determine the relationship between dictionary (both paper and electronic) consultation and vocabulary retention. The results of the studies do not advocate the distinct advantages of one dictionary form over the other. In the recent studies, researchers presented interesting data on specific features distinguishing paper or electronic dictionaries, with the focus on complex innovative features developed for the internet dictionaries. The literature reviewed comprises both studies on the comparison of dictionaries and on the theories applied in the current and future development of information tools.

The second part of the study dealt with the analysis of the survey conducted in 2012 and its comparison to the study carried out in 2007. In terms of the preferences in dictionary use, the results obtained from both surveys reveal increasing electronic dictionary consultation. With the growing accessibility of the Internet on mobile devices with innovative features and a wide range of high quality reference resources available on the Net, the use of internet dictionaries continues to be on a sharp upward trajectory.

To most questions comparable answers were provided. The subjects of both studies favoured bilingual dictionaries over monolingual dictionaries, reasons for look-ups being the meaning of unknown words. Second, a similar percentage of the respondents encountered the same type of difficulties when consulting a dictionary. Third, the majority of the respondents in both studies acknowledged the importance of being taught dictionary consultation skills. Hopefully users will not be discouraged from developing the competence in dictionary use and Lew’s (2011a) assumption that the majority will continue to search on Google which would be a threat to specialised information tools, e-dictionaries including will not come true.

## References

1. AlBulushy, Z. S., 2012. Paper Dictionary or Electronic One? *Developing Teachers.com*. Available at: [http://www.developingteachers.com/articles\\_tchtraining/dictionarypf\\_zainab.htm](http://www.developingteachers.com/articles_tchtraining/dictionarypf_zainab.htm) [accessed March 2012].
2. Almind, R., 2005. Designing Internet Dictionaries. *Hermes, Journal of Linguistics*, No. 34. Available at: <https://pure.au.dk/portal/files/9875/Hermes-34-3-RAB.pdf> [accessed September 2012].

3. Bothma, T., 2011. Filtering and Adapting Data and Information in an Online Environment in Response to User Needs. In: P. A. Fuertes-Olivera and H. Bergenholtz (eds.). *e-Lexicography. The Internet, Digital Initiatives and Lexicography*. London/New York: Continuum, pp. 71–102.
4. Campoy Cubillo, M. C., 2002. General and Specialised Free Online Dictionaries. *Teaching English with Technology*, Vol. 2, No. 3, pp. 42–47. Available at: <http://www.iatefl.org.pl/call/callnl.htm> [accessed September 2012].
5. Chen, Y., 2010. Dictionary Use and EFL Learning: A Contrastive Study of Pocket Electronic Dictionaries and Paper Dictionaries. *International Journal of Lexicography*, No. 23(3), pp. 275–306. <http://dx.doi.org/10.1093/ijl/ecq013>
6. De Schryver, G.-M., 2003. Lexicographers' Dreams in the Electronic-dictionary Age. *International Journal of Lexicography*, No. 16(2), pp. 143–199. <http://dx.doi.org/10.1093/ijl/16.2.143>
7. Dziemianko, A., 2010. Paper or Electronic? The Role of Dictionary Form in Language Reception, Production and the Retention of Meaning and Collocations. *International Journal of Lexicography*, No. 23(3), pp. 257–273. <http://dx.doi.org/10.1093/ijl/ecp040>
8. Dziemianko, A., 2011. Does Dictionary Form Really Matter? In: K. Akasu, S. Uchida (eds.) *ASIALEX2011 Proceedings. Lexicography: Theoretical and Practical Perspectives*. Kyoto: Asian Association for Lexicography, pp. 92–101. Available at: <http://hdl.handle.net/10593/5783> [accessed January 2013].
9. *dictionary.com*. Available at: <http://dictionary.reference.com/> [accessed September 2012].
10. Fuertes-Olivera, P. A., 2009. Systematic Introductions in Specialised Dictionaries: Some Proposals in Relation with the Accounting Dictionaries. In: S. Nielsen and S. Tarp (eds.). *Lexicography in the 21st Century. In Honour of Henning Bergenholtz*. Amsterdam/Philadelphia: John Benjamins, pp. 161–178.
11. Fuertes-Olivera, P.A., 2011. Equivalent Selection in Specialized e-Lexicography: A Case Study with Spanish Accounting Terms. *Lexikos*, Vol. 21, pp. 95–119. Available at: [www.ajol.info/index.php/lex/article/download/61731](http://www.ajol.info/index.php/lex/article/download/61731) [accessed February 2013].
12. Heid, U., 2011. Electronic Dictionaries as Tools: Towards an Assessment of Usability. In: P. A. Fuertes-Olivera and H. Bergenholtz (eds.). *e-Lexicography. The Internet, Digital Initiatives and Lexicography*. New York: Continuum, pp. 287–304.
13. Kobayashi, Ch., 2007. Comparing Electronic and Printed Dictionaries: Their Effects on Llexical Processing Strategy Use, Word Retention and Reading Comprehension. In: K. Bradford-Watts (ed.). *JALT 2006 Conference Proceedings*. Tokyo: JALT, pp. 657–671.
14. Krajka, J., 2007. Online Lexicological Tools in ESP – Towards an Approach to Strategy Training. *Journal of the Slovene Association of LSP Teachers*, Vol. 3(1). Available at: [http://www.sdutsj.edus.si/Scripta Manent/2007\\_1/Krajka.html](http://www.sdutsj.edus.si/Scripta Manent/2007_1/Krajka.html) [accessed September 2012].
15. Lew, R. 2011a. Online Dictionaries of English. In: P. A. Fuertes-Olivera and H. Bergenholtz (eds.). *e-Lexicography: The Internet, Digital Initiatives and Lexicography*. London and New York: Continuum, pp. 230–250.
16. Lew, R. 2011b. Space Restrictions in Paper and Electronic Dictionaries and their Implications for the Design of Production Dictionaries. A preprint version. In: P. Bański and B. Wójtowicz (eds.). *Issues in Modern Lexicography*. München: Lincom Europa. Available at: <http://hdl.handle.net/10593/799> [accessed January 2013].
17. Lew, R. 2011c. Studies in Dictionary Use: Recent Development. *International Journal of Lexicography*, Vol. 24, No. 1, pp. 1–4. Available at: <http://ijl.oxfordjournals.org/content/24/1/1.full.pdf?keytype=ref&ikey=Wkh82Dp3N8gKOe0> [accessed January 2013].
18. Nesi, H., 2000. On Screen or in Print? Students' Use of a Learner's Dictionary on CD-ROM and in Book Form. In: P. Howarth and R. Herington (eds.). *EAP Learning Technologies*. Leeds: University Press, pp. 106–114.
19. Petrylaitė, R., Vaškeliėnė, D., Vėžytė, T., 2008. Changing Skills of Dictionary Use. *Kalbų studijos / Studies about Languages*, nr. 12, pp. 77–82.
20. Rylova, A., 2011. Adapting the Dictionary Entry Structure and DWS Configuration for Creating a Dictionary Aimed to be Published on Paper, Online and as Electronic Dictionary Software for PC and Mobile. *Proceedings of eLex 2011*, pp. 247–250. Available at: <http://www.trojina.si/elx2011/Vsebine/proceedings/eLex2011-33.pdf> [accessed January 2013].
21. Scholfield, P., 2002. Why shouldn't Monolingual Dictionaries be as Easy to Use as Bilingual Ones? *PearsonELT.com*. Available at: <http://www.longman.com/dictionaries/teachers/articles/p-scholfield-02.html> [accessed September 2012].
22. Tarp, S., 2011. Lexicographical and Other e-Tools for Consultation Purposes: Towards the Individualization of Needs Satisfaction. In: P. A. Fuertes-Olivera and H. Bergenholtz (eds.). *e-Lexicography. The Internet, Digital Initiatives and Lexicography*. New York: Continuum, pp. 54–70.
23. Tono, Y., 2011. Application of Eye-tracking in EFL Learners' Dictionary Look-up Process Research. *International Journal of Lexicography*, No. 24(1), pp. 124–153. <http://dx.doi.org/10.1093/ijl/ecq043>
24. Varantola, K., 2002. Use and Usability of Dictionaries. Common Sense and Context Sensibility. In: M. H. Corréard (ed.). *Lexicography and Natural Language Processing: A Festschrift in Honour of B.T.S. Atkins*. Stuttgart: Euralex, pp. 30–44.
25. *Webster's New Dictionary*, 1990. Available at: <http://www.merriam-webster.com/dictionary> [accessed September 2012].

Regina Petrylaitė, Tatjana Vėžytė

#### **Pakartotinis naudojimosi žodynais tyrimas**

Santrauka

Šiuo tyrimu siekiama 1) išnagrinėti naudojimosi žodynais studijas ir 2) palyginti dviejų tyrimų, atliktų 2007 ir 2012 m., kuriuose analizuojami studentų prioritetai renkantis tradicinės ir elektroninės informacijos paieškos priemones, rezultatai. Žodynų naudojimosi studijų apžvalgoje aptariami žodynų tipai (tiek elektroninio, tiek popierinio formatų), jie lyginami pagal veiksmus, turinčius įtakos vartotojų veiksmams, parodoma žodynų, kaip informacijos šaltinių, reikšmė, atskleidžiami skirtingų tipų žodynų privalumai ir trūkumai. Be to, naujais žodynų, kaip informacinių priemonių plėtros, tyrimai pateikia kitokį požiūrį, taikomą kuriant internetinius žodynus. Naujausiose skaitmeninės leksikografijos studijose ypatingas dėmesys yra skiriamas vartotojų poreikiams. Reikia atlikti daugiau mokslinių tyrimų siekiant geriau suprasti vartotojų poreikius, atsižvelgiant į kuriojus bus galima derinti ir keisti elektroninius įrankius. Remiantis abiejų lyginamųjų tyrimų rezultatų analize pastebėta, kad studentai, siekdami suprasti specializuotus tekstus ir atlikti užduotis, elektroniniais žodynais naudojami daug dažniau nei spausdintais.

Straipsnis įteiktas 2013 06  
Parentas spaudai 2013 06

#### **About the authors**

**Regina Petrylaitė**, lecturer at Kaunas University of Technology, Faculty of Humanities, Lithuania.

*Research interests:* language teaching methodology, lexicography.

*Address:* Faculty of Humanities, Kaunas University of Technology, Gedimino Str. 43, LT-44240 Kaunas, Lithuania.

*E-mail:* regina.petrylaite@ktu.lt

**Tatjana Vėžytė**, lecturer at Kaunas University of Technology, Faculty of Humanities, Lithuania.

*Research interests:* language teaching methodology, lexicography.

*Address:* Faculty of Humanities, Kaunas University of Technology, Gedimino Str. 43, LT-44240 Kaunas, Lithuania.

*E-mail:* tatjana.vezyte@ktu.lt