

skills, nor could the dictionary solve all of the problems users met in the translation process. Therefore, we believe that this experiment can represent actual use of a dictionary for translation in a natural setting.

	N	Min	Max	Mean	SD	F
Retrieval success	47	.34	1.00	.8445	.15406	.024
Effective	47					

Table 1: Results of lexical information availability test in the e-dictionary

Table 1 shows that the average retrieval success was 84%. This means that 84% of the words users searched were available in the embedded dictionary. We believe this result reflects the authentic situation of dictionary use in linguistic activities. Firstly, as new words or new usages of existing words emerge almost every day, the available Chinese–English dictionaries cannot immediately include all the words in use. Secondly, since a Chinese character could be part of a word, a word or a phrase, some users do not know the lexical unit they should look up in the dictionary. This is evidenced by some students failing to find the target words in the dictionary because they looked up phrases, clauses or even sentences rather than words. Thirdly, some students lacked the instrumental ability of translation competence. They read only the English equivalents while ignoring other information categories which might be helpful to their translation.

4.1 Translation learners' dictionary use

4.1.1 The words looked up

Drawing on ICTCLAS2014, the original text was found to contain 198 Chinese running words, and our results showed that users consulted high-frequency words most often. This finding is consistent with that of Varantola (1998) and Koplein, Meyer and Muller-Spitzer (2014). The reason could be that users consult dictionaries not only to learn about new words but also to check whether their understanding or use of high-frequency words is accurate. The learners looked up a small number of function words. This is possibly because translation learners felt they were more familiar with these words than other high-frequency words and function words usually were not the barrier to understanding. With regard to the word classes users retrieved, Table 2 reveals that the users consulted content words most often; 89% of the words looked up were verbs, nouns, adjectives and adverbs. This is quite understandable. Firstly, content words are related to both meaning comprehension and pro-

duction. Secondly, the number of content words was high in the original text, about 134. Thirdly, many content words are in wide use and carry multiple meanings which usually cause trouble for students' meaning understanding and production, while function words, users assumed, were relatively familiar to them. The average number of words looked up by each user was 45 while the average number of content words looked up by users was 40. The high proportion of content words in the words that were looked up reflects the fact that users relied heavily on dictionaries to express their meaning.

In addition, the majority of words looked up were basic words such as "effort" (looked up 31 times), "progress" (looked up 35 times), "road" (looked up 31 times), "ability" (looked up 26 times). Some students even looked for the equivalents of such words as "easy" (looked up twice), "important" (looked up 4 times) and "now" (looked up twice). Interviews revealed that some students looked up these words to check whether what they remembered about them was correct.

We also found that users treated multi-word expressions as retrieval units. Most of the items that were looked up were actually phrases and expressions. For instance, *zhì lì jìn qǔ*, (i.e. make great efforts) was looked up 9 times; *què dìng mù biāo* (i.e. set the target) was looked up 4 times and *yóusuo jìn bù* (i.e. make some progress) was looked up 5 times. This revealed that translation students understand texts in terms of semantic units rather than lexical units. Therefore, to help users' retrieval efficiency, we believe more phrases should be included in the dictionary for translation learners. This would be easy to tackle in electronic dictionaries. To improve learners' understanding of these expressions, dictionaries should provide more contextual information within entries for this group of users.

Part of Speech	V.	N.	Adj.	Adv.	Total
Number of Looked-up content words	20	13	5	2	40
Average number of looked-up words					45
Percentage					89%

Table 2: The percentage of content words in the words looked up by users

4.1.2 The information categories users clicked on

Since a small number of the words users searched for were not found in the dictionary, the relevant clicks were not included in the results of this study. Repeated clicks were included, however, as this reflected the users' actual dictionary use behavior and needs.

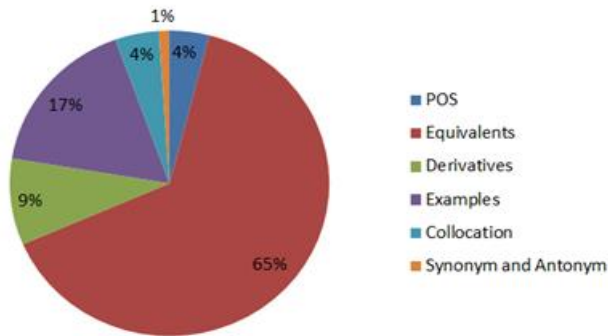


Figure 2: Pie Chart of click counts of information categories

Figure 2 shows that there are big differences between the click counts for different information categories. *Equivalents* are ranked first and account for 65% of the total click counts whereas *Examples* account for 17%, *Derivatives* 9% and *Collocation* and *Part-of-Speech* only 4%. *English equivalents* were the most consulted parts of the dictionary entries while synonyms and antonyms were the least looked-up elements. This might be because equivalents are usually the first step towards transferring an idea into English, but it could also be attributed to the learners' lack of translation skills. Frankenberg-Garcia (2011) found that users do not know which information to look up beyond L1–L2 equivalents. This finding is consistent with that of Atkins and Varantola (1997), who found that in L1–L2 translation, consulting and checking foreign language equivalents accounted for 77% of dictionary look-ups. Our follow-up interviews revealed that the users regarded the provision of English equivalents as a basic requirement for a dictionary and some even went so far as to claim that the provision of English equivalent was sufficient for translation most of the time. If necessary, the learners also browsed other information categories. For example, when they did not know the usage of the equivalent, they looked at other information such as "examples". Interviewees responded that examples could enhance their understanding of the equivalents and could serve as models in translation. When asked about their preference, those who did not browse examples said that examples could be very useful. They did not look at the examples just because they forgot to do so, or because they thought that the equivalents were sufficient for their purposes. If they had looked at examples, their expression would have been more natural and idiomatic. This finding is different from that of Chan (2014: 34), who found that in determining the meaning of words and making sentences, Chinese monolingual English dictionary users relied most on examples (90%), and then definitions (63.6%). Examples could help users learn about the detailed usage of words because they demonstrate the specific use of words in context, but some translation learners in our study lacked the skills to use dictionaries in translation. As

translation learners, they missed the opportunity to learn new words and expressions that could have been used in their translations later.

4.1.3 Selection of equivalents

To understand users' preference in choosing equivalents, we chose ten words with three equivalents and placed the most familiar ones in the second positions in the dictionary. The frequency of the users' choice among the three positions is as follows:

Equivalents (Frequency of choice)	Position		
	1	2	3
Chinese words			
发现(faxian)	discover (22)	find (3)	identify (0)
创造(Chuangzao)	create(28)	produce(1)	bring about (1)
付出(fuchu)	pay(27)	devote(22)	commit(3)
进步(jinbu)	advance(5)	progress(15)	improve (5)
预想(yuxiang)	anticipate(0)	expect(22)	speculate(1)
确定(queding)	determine(9)	define(1)	fix(1)
目标(mubiao)	objective(1)	goal(11)	aim(3)
成果(chengguo)	achievement(13)	gain(1)	harvest(8)
不懈(buxie)	untiring(5)	unremitting(29)	unrelenting(1)
战胜(zhansheng)	defeat(17)	vanquish(2)	conquer(4)
Total	127	107	27

Table 3: English equivalents in three positions and respective selection frequency

Table 3 shows that selection of the first equivalent was most frequent (48.7%). Selection of the second equivalent did not fall far behind (41%). Selection of the third equivalent was the smallest (10.3%). These results confirm the finding of other researchers (Tono 1984; Li 1998) about users' strategy in using a dictionary: they tended to utilize the beginning of an entry. Tono (1984) found that dictionary users tended to choose the first definition unless clear information to reject it was indicated. Li (1998) found that one factor responsible for mistranslation was that dictionary users tended to choose the first equivalent in the dictionary entry. We also wondered why the second equivalents were nearly as popular as the first equivalents. In follow-up interviews, respondents indicated

that they preferred to choose the equivalents they were most familiar with. In the first place, these choices could give them assurance. In the second place, these choices could facilitate their expression because they are more familiar with the usage of these words than other words. For those words they encountered before, this strategy offered learners opportunities to use them again and ultimately could contribute to the acquisition of these words.

4.2 Application of retrieved information

Previous studies (Varantola 1994, Atkins and Varantola 1997) highlight the need for a more in-depth analysis of dictionary use during a translation task. We hold that analysis of dictionary information application would be a step toward that end. Varantola (1998) has argued that it is difficult to evaluate the use of words in the translation product because translators use different standards for their choices. However, we believe that this analysis is significant and feasible. Although there are different ways to evaluate a translation product, we can judge whether the use of words is grammatically correct or not. The analysis of the content can inform us of the application ability of translator trainees, that is, whether a user can adapt the information from a dictionary to the context of a translation text. In other words, this analysis can reveal the particular linguistic and transfer needs of users in translation. To be more effective, bilingual dictionaries should gear their information toward the needs of translation learners as most of them claim that translators and translation learners are their target users. For example, if users have difficulty in choosing the correct part-of-speech form of a word, dictionaries can provide more instruction in presentation of definition, senses or examples.

As for the operation of this analysis, we focus on how well users applied the dictionary information to the translation task by conducting errors analysis, correctness analysis, and by examining possible causes for errors.

4.2.1 Error analysis

From the products of students, we determined that students' errors in using the dictionary information fall into two categories: parts of speech and collocation. We offer a focused case study that illustrates our wider findings in these categories.

For errors in tense, we take the verb "预想 yù xiǎng" (which literally means "expect").

The original sentence:

我们要有所进步、有所发现、有所创造，常要付出比预想多出许多的努力。

Suggested translation: *To make some progress, discoveries or creations, we must make more efforts than expected.*

In the original text, "预想 yù xiǎng" (which literally means "expect") is used as a noun. In the translation, it could be used as a noun. If students want to express it as a verb in English, they must shift the word class of the equivalents.

As "预想 yù xiǎng" (which literally means "expect") is labeled as a verb in the four dictionaries, the dictionary in the study provides three verbs in the *Equivalents* (*anticipate; expect; speculate*) and noun forms (*anticipation; expectation; speculation*) in the *Derivative* category. In the categories such as *Collocation* and *Examples*, it also provides the verb form.

Among the forty-seven students, thirty-three students used "expect". Video recordings informed us that only twenty-two students looked up "yù xiǎng" in the dictionary and eighteen users chose "expect" in the equivalents. That is, most of students chose the most familiar equivalent. A closer observation found that in the use of the word "expect", seven instances of incorrect usage were found. The following sentence fragments were taken from students' products of translation and students' IDs are in the parentheses.

We should often pay out much more effort than expecting if ... (Student 1091)

..., we will make more effort to make it than expecting before. (Student 1128)

We need to devote more than we had expected i f ... (Student 1006)

..., you must pay more than you have expected. (Student 1002)

We should pay much more efforts than our expect so that ... (Student 1133)

..., we usually need to pay out more effort than expect. (Student 1140)

So we should make great efforts which beyond our expectation ... (Student 1132)

From the translation products of students, we can see that two learners (Student 1091 and Student 1128) used it as "expecting" in the context. They used the gerund form of "expect" incorrectly, as there is no objective. The video informed us that these students just read the information category of *English equivalents*. If they had clicked on the other information categories such as *Derivative*, *Collocations* or *Bilingual examples*, they would probably have known more about this word and chosen its form appropriate for this context. Two learners (Student 1006 and Student 1002) used "expect" in the perfect tense. One (Student 1006) used it in the past perfect tense and the other (Student 1002) used it in the present perfect tense. Four students who did not consult the dictionary made similar mistakes. They used it in the past tense as "we expected ...". One user (Student 1133) took it as a noun. If the student had clicked on the *Past of Speech* or *Derivatives*, he or she would have found the noun form of "expect". One learner (Student 1132) transferred the phrase "beyond one's expectation" from the bilingual example "The beauties of the West Lake in spring were beyond his expectation." to his or her translation but the phrase was not used correctly. Such errors indicate that these learners lacked knowledge of the general grammatical rules. It would be an advantage if the description and explanation of some general rules could be incorporated into the dictionary as a separate section and individual dictionary articles could refer to them (Tarp 2008: 234).

Study Pages in the OALD8 (*Oxford Advanced Learner's Dictionary*, 8th Edition) could serve as a good example.

When we asked about errors in tense in follow-up interviews, some students responded that they forgot to find information about the different forms of the equivalents in the dictionary. When they were engaged in translation, they focused on the meaning transfer rather than on the form of the words they used. Others said that they failed to find enough tense information about verbs in the examples. This has implications for both teachers and dictionary compilers. Since the Chinese language does not have as many tense markers as the English language, it would be helpful to Chinese translation learners if the general rules of tense could be incorporated into Chinese–English dictionaries as a separate section. At the same time, teachers should draw learners' attention to this difference between two languages in their instruction.

With regard to collocation, we take "*mù biāo*" (which literally means "goal") as an example.

The original clause: 人确定自己的目标后...

Suggested translation: *After setting a goal, ...*

In the original Chinese text, *mù biāo* (which literally means "goal") collocated with the verb *què dìng* (which literally means "define"). For the verb *què dìng*, the dictionary provided three equivalents, namely, *determine*, *define*, *fix*. In the category of *Collocation*, the dictionary provides two phrases 确定日期 (*què dìng rì qī*) *fix a date*; 确定目标 (*què dìng mù biāo*) *set a goal/an aim*. Video recordings showed that twenty-one students did not look up this word. Twelve students looked up *què dìng* while six students looked up *mù biāo*. Eight students looked up both *què dìng* and *mù biāo*. The following sentence fragments were taken from students' products of translation and students' IDs are in the parentheses.

..., after people fixing on the goals, (Student 1091)

Once people determine their goals, ... (Student 1096)

After people determine their goals, ... (Student 5010)

Once you determine a goal, ... (Student 1003)

Once we set up our goal, ... (Student 1009)

When you set an ambitious goal, ... (Student 1010)

Once we make a clear goal, ... (Student 1132)

Once you have defined your goal, ... (Student 5002)

In the translation products of students, we found that collocate words used with *goal* were as follows: *determine* 9 times, *set* 6 times, *set up* 1 time, *make* 3 times, *define* 1 times, *fix on* 1 time. We checked these collocation choices with *goal* in BNC (*British National Corpus*) and found that in the first 100 collocates; *set* is ranked the second, *make* 13rd, *fix* 93rd. We regard these collocations as acceptable. However, for the collocations with *determine*, *set up*, *define*, and *fix on*, which are not found in the corpus, we regard these collocations as unacceptable.

In follow-up interviews, some students responded that they did not give much attention to collocation. They just picked the first equivalent or the one they were familiar with and then applied it in the translation. Sometimes, even when they looked for the information, they could not find it in the dictionary. In the translation task, the verb *què dìng* collocates with *mù biāo*. So most students who translated word by word felt it unnecessary to think about collocation. That is to say, these translation learners were not aware that the collocation of a word in two languages might be different. This also has implications for Chinese–English dictionary compilers. For example, when they provide equivalents for a word, they should also give more information such as definition, style and collocation, which can help users to identify the distinctions between equivalents and then make informed choices. This problem exists in almost all Chinese–English dictionaries available in China and had already been pointed out by researchers (Wei 2000; Hu and Zhang 2011; Xu 2012).

4.2.2 Correctness analysis

The success of word application in learners' translations was decided by the negotiation between the two researchers. When students looked up the same word but chose different expressions, their application of dictionary information would be regarded as successful if the words or expressions were used correctly. For instance, twenty-two students looked up "yù xiǎng" (which literally means "expect") in the dictionary. Eighteen of them chose "expect" and eleven of them used it correctly. At the same time, one student chose "speculate" and used it as "make more efforts than we speculate", and it was coded as correct. Another student who did not choose any of the equivalents but read the bilingual examples produced the following translation, "make more efforts than our first thought". It was also judged as successful application of dictionary information. Correctness ratio refers to the comparison between the number of words or expressions a student looked up and the words she or he applied correctly in their translation. For example, a student looked up twenty-nine words and found the equivalents of twenty-four words. If fifteen equivalents were used correctly in the translation, his or her correctness ratio would be 63%. The following is an overview of the correctness ratio.

	N	Mini	Maxi	Mean	SD
Correctness	47	.60	1.0	.82	.1188
Number	47				

Table 4: Correctness of dictionary information application

Li (1998) found that 73% of the lookups in English–Chinese translation is successful. Table 4 shows that in our study, 82% of consultation was successful and dictionary use contributed to Chinese–English (L1–L2) translation.

To investigate whether consultation preference has an impact on the correctness of their dictionary information application in translation, we divided students into three groups on the basis of their consulting preferences. Group one consisted of students who only looked up *Equivalents*; Group two consisted of students who consulted both *Equivalents* and *Examples*; Group three consisted of students who consulted *Equivalents*, *Examples* and *Collocation*. A one-way ANOVA test was carried out to explore whether there was a significant difference between the groups. The statistical results indicated that there is a significant difference between these groups ($F=6.968$, $P=0.002<0.01$). The following table shows the result.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.156	2	.078	6.968	.002
Within Groups	.494	44	.011		
Total	.650	46			

Table 5: Results of group difference test

For more detailed information about the difference, we made a further analysis.

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2.00	-.13281*	.03251	.001
	3.00	-.10193*	.03750	.027
2	1.00	.13281*	.03251	.001
	3.00	.03087	.03328	.628
3	1.00	.10193*	.03750	.027
	2.00	-.03087	.03328	.628

Table 6: Results of group difference identification test

The results show that there is a significant difference between group one and group two (Mean Difference=0.13281, $p=0.001<0.01$). A significant difference also exists between Group two and Group three (Mean Difference=0.10193, $p=0.03<0.05$). This implies that when student translators know more information about a word, the correctness of translation also increases. This is consis-

tent with Laufer (1993) who found that the combination of *definition* and *examples* contributes more to translation than *definition* or *examples* alone. The latter has no significant influence on translation. This could be explained by the fact that examples and collocation provide more detailed usage of words. The information can either demonstrate the usage of words in context or provide exemplary use of the word in the task. As no student only looked up the information category *Examples*, we cannot find out the relationship between examples and correctness of word use. The findings suggest that dictionaries should provide more information for learners and more importantly, translation trainers should encourage students to read more information in the dictionary.

In previous studies, researchers (Peters 2007; Lew and Doroszevska 2009; Chen 2011) also investigated the relationship between click counts and vocabulary retention, with various conclusions. Our study showed that there is no correlation between correctness and click counts. As learners cannot use them correctly in the first place, it can be predicted that there is no correlation between click counts and vocabulary retention. This could be attributed to the fact that the majority of clicks were on the *Equivalents* and this information category did not provide detailed information about the usage of words. In addition, the number of clicks does not necessarily equate to a deepening of understanding. Therefore, it can be concluded that information category rather than click counts has more influence on correctness of lexical information application.

5. Conclusion

This study investigated the use of an electronic dictionary (digitalized print dictionaries) by students in a natural setting. It provides a more complete picture of dictionary use by EFL learners as it utilized both positivistic and naturalistic research methods. It contributes to the literature of dictionary use study by providing a detailed description and analysis of users' dictionary information application during a translation task. The study has five findings: 1) EFL learners' consulting preferences include *Equivalents* and *Examples*; 2) EFL learners preferred to choose the most familiar equivalents; 3) EFL learners looked up content words and phrases more than other words; 4) EFL learners' errors in dictionary information application lie in collocation and parts of speech; 5) EFL learners' correctness of dictionary information application increases as students consult, or click on, additional information categories. These findings have implications for Chinese–English dictionary compilers, who are tasked with providing high-quality equivalents and examples as users relied heavily on them. For example, dictionary compilers could provide more information about equivalents so that users know the difference between them and make the informed choices. In the bilingual examples, compilers could demonstrate the usage of the equivalents so that users could learn how to use these words in

context. To enhance users' retrieval success, dictionaries could provide more content words and phrases. Results also confirm that translation teachers should encourage students to read more information categories in dictionary use.

This study focused on the looking up preferences of translation trainees and their application of dictionary information. It has some limitations: the number of participants is not very large, the number of dictionary entries is small and findings are based chiefly on an observation. To improve its reliability, further studies with mixed research methods should be conducted.

Acknowledgement

The research was funded by the College Philosophy and Social Science Foundation of Jiangsu Provincial Department of Education (Grant No. 2016SJB740007) and by The Third Phase of the Project Funded by the Priority Academic Program Development of Jiangsu Higher Education Institutions (PAPD: Phase iii) (Project No. 20180101). We are especially grateful to two anonymous reviewers and Dr Wei Xiangqing for their insightful comments and constructive suggestions. Our thanks also go to Roy Stamper from NC State University for proof-reading the manuscript and all the participants in the study.

References

A. Dictionaries

- Hornby, A.S. (Ed.).** 2010. *Oxford Advanced Learner's Dictionary* (8th edition). Oxford: Oxford University Press.
- Hui, Y. (Ed.).** 2012. *New Century Chinese–English Dictionary*. Beijing: Foreign Language Teaching and Research Press.
- Kingsoft PowerWord 2017*. Accessed on March 10, 2017. <http://www.iciba.com>.
- Yao, X.P. (Ed.).** 2010. *A Chinese–English Dictionary*. Third edition. Beijing: Foreign Language Teaching and Research Press.
- Youdao Dictionaries 7.0*. Accessed on March 10, 2017. <http://dict.youdao.com>.

B. Other literature

- Anthony, L.** 2010. AntConc (Version 3.2.1) [Computer Software]. Tokyo, Japan: Waseda University. Available from <http://www.laurenceanthony.net/software>.
- Atkins, B.T.S. and K. Varantola.** 1997. Monitoring Dictionary Use. *International Journal of Lexicography* 10(1): 1-45.
- Barnhart, C.L.** 1962. Problems in Editing Commercial Monolingual Dictionaries. Householder, Fred W. and Sol Saporta (Eds.). 1962. *Problems in Lexicography*: 161-181. Bloomington: Indiana University/The Hague: Mouton.

- Bogaards, P.** 1998. What Type of Words do Language Learners Look Up? Atkins, B.T. Sue (Ed.). 1998. *Using Dictionaries: Studies of Dictionary Use by Language Learners and Translators*: 151-158. Tübingen: Max Niemeyer.
- Bogaards, P.** 2003. Uses and Users of Dictionaries. Van Sterkenburg, P. (Ed.). 2003. *A Practical Guide to Lexicography*: 26-33. Amsterdam/Philadelphia: John Benjamins.
- Chan, A.Y.W.** 2012. The Use of a Monolingual Dictionary for Meaning Determination by Advanced Cantonese ESL Learners in Hong Kong. *Applied Linguistics* 33(2): 115-140.
- Chan, A.Y.W.** 2014. Using LDOCE5 and COBUILD6 for Meaning Determination and Sentence Construction: What Do Learners Prefer? *International Journal of Lexicography*: 27(1): 25-53.
- Chen, Y.** 2010. Dictionary Use and EFL Learning. A Contrastive Study of Pocket Electronic Dictionaries and Paper Dictionaries. *International Journal of Lexicography* 23(3): 275-306.
- Chen, Y.** 2013. A Correlational Study between Dictionary Lookup Behavior and Vocabulary Acquisition under CALL Context. *Foreign Languages and Their Teaching* 5: 46-51.
- Chen, Y.** 2017. Dictionary Use for Collocation Production and Retention: A CALL-based Study. *International Journal of Lexicography* 30(2): 225-251.
- Chen, Y.Z.** 2011. The Use of Bilingualized English–Chinese Learner's Dictionaries: A Survey and An Experiment. *Lexicographical Studies* 2: 141-158.
- 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* 23(3): 257-273.
- Dziemianko, A.** 2014. On the Presentation and Placement of Collocations in Monolingual English Learners' Dictionaries: Insights into Encoding and Retention. *International Journal of Lexicography* 27(3): 259-279.
- Frankenberg-Garcia, A.** 2011. Beyond L1–L2 Equivalents: Where Do Users of English as a Foreign Language Turn for Help? *International Journal of Lexicography* 24(1): 97-123.
- Frankenberg-Garcia, A.** 2015. Dictionaries and Encoding Examples to Support Language Production. *International Journal of Lexicography* 28(4): 490-512.
- Gromann, D. and J. Schnitzer.** 2016. Where Do Business Students Turn for Help? An Empirical Study on Dictionary Use in Foreign-language Learning. *International Journal of Lexicography* 29(1): 55-99.
- Hartmann, R.R.K.** 1983. The Bilingual Learner's Dictionary and Its Uses. *Multilingua* 2(4): 195-201.
- Harvey, K. and D. Yuill.** 1997. A Study of the Use of a Monolingual Pedagogical Dictionary by Learners of English Engaged in Writing. *Applied Linguistics* 18(3): 253-278.
- Hu, W.F. and Y.H. Zhang.** 2011. A Survey of Sense Representation in Chinese–English Dictionaries from the Perspective of Users. *Foreign Languages Research* 3: 78-84.
- Hu, W.F. and Y.H. Zhang.** 2013. The Effect of Definition Model in C–E Dictionaries on Chinese EFL Learner's English Productive Ability. *Journal of Foreign Languages* 34(5): 54-62.
- Kaneta, T.** 2011. Folded or Unfolded: Eye-tracking Analysis of L2 Learners' Reference Behavior with Different Types of Dictionary Interfaces. Akasu, K. and U. Satoru (Eds.). 2011. *ASIALEX 2011 Proceedings. Lexicography: Theoretical and Practical Perspectives, 22–24 August 2011*: 219-224. Kyoto: Asian Association for Lexicography.
- Koplenig, A., P. Meyer and C. Müller-Spitzer.** 2014. Dictionary Users Do Look Up Frequent Words. A Log File Analysis. Müller-Spitzer, Carolin (Ed.). 2014. *Using Online Dictionaries*: 229-250. Berlin/Boston: De Gruyter.

- Laufer, B.** 1993. The Effect of Dictionary Definitions and Examples on the Use and Comprehension of New L2 Words. *Cahiers de Lexicologie* 63(2): 131-142.
- Laufer, B. and L. Hadar.** 1997. Assessing the Effectiveness of Monolingual, Bilingual, and "Bilingualised" Dictionaries in the Comprehension and Production of New Words. *The Modern Language Journal* 81(2): 189-196.
- 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 & Technology* 3(2): 58-76.
- Laufer, B. and L. Melamed.** 1994. Monolingual, Bilingual and "Bilingualised" Dictionaries: Which are More Effective, for What and for Whom? Martin, W. et al. (Eds.). 1994. *Euralex 1994 Proceedings, Papers submitted to the 6th EURALEX International Congress on Lexicography in Amsterdam, The Netherlands*: 565-576. Amsterdam: Vrije Universiteit.
- Lew, R.** 2011a. Studies in Dictionary Use: Recent Developments. *International Journal of Lexicography* 24(1): 1-4.
- Lew, R.** 2011b. User Studies: Opportunities and Limitations. Akasu, K. and U. Satoru (Eds.). 2011. *ASIALEX 2011 Proceedings. Lexicography: Theoretical and Practical Perspectives, 22–24 August 2011*: 7-16. Kyoto: Asian Association for Lexicography.
- Lew, R.** 2012. How Can We Make Electronic Dictionaries More Effective? Granger, S. and M. Paquot (Eds.). 2012. *Electronic Lexicography*: 343-361. Oxford: Oxford University Press.
- Lew, R. and G.-M. de Schryver.** 2014. Dictionary Users in the Digital Revolution. *International Journal of Lexicography* 27(4): 341-359.
- Lew, R. and J. Doroszewska.** 2009. Electronic Dictionary Entries with Animated Pictures: Lookup Preferences and Word Retention. *International Journal of Lexicography* 22(3): 239-257.
- Li, L.** 1998. *A Study of Dictionary Use by Chinese University Learners of English for Specific Purposes*. Ph.D. dissertation. Exeter: University of Exeter.
- Liang, P. and D. Xu.** 2017. The Contribution of Dictionary Use to the Production and Retention of the Middle Construction for Chinese EFL Learners. *International Journal of Lexicography* 30(1): 85-107.
- Nesi, H.** 2014. Dictionary Use by English Language Learners. *Language Teaching* 47(1): 38-55.
- Pan, X.S.** 2012. *PMLX (Version V2012)* [Computer Software]. Wenzhou, China: Tianlangxing Software Studio. Available from: <http://www.tlxsoft.com>.
- Peters, E.** 2007. Manipulating L2 Learners' Online Dictionary Use and Its Effect on L2 Word Retention. *Language Learning & Technology* 11(2): 36-58.
- Sánchez Ramos, M.M.** 2005. Research on Dictionary Use by Trainee Translators. *Translation Journal* 12(10): 25-35.
- Tarp, S.** 2009. Reflections on Lexicographical User Research. *Lexikos* 19: 275-296.
- Tomaszczyk, J.** 1979. Dictionaries: Users and Uses. *Glottodidactica* 12: 103-119.
- Tono, Y.** 1984. *On the Dictionary User's Reference Skills*. Unpublished B.Ed. thesis. Tokyo: Gakugei University.
- Tono, Y.** 1989. Can a Dictionary Help One Read Better? On the Relationship Between EFL Learners' Dictionary Reference Skills and Reading Comprehension. James, G. (Ed.). 1989. *Lexicographers and Their Works*: 192-200. Exeter: University of Exeter Press.
- Varantola, K.** 1994. The Dictionary User as Decision Maker. Martin, Willy et al. (Eds.). 1994. *EURALEX 1994 Proceedings*: 606-611. Amsterdam: Vrije Universiteit.

- Varantola, K.** 1998. Translators and Their Use of Dictionaries. Atkins, B.T. Sue (Ed.). 1998. *Using Dictionaries: Studies of Dictionary Use by Language Learners and Translators*: 179-192. Tübingen: Max Niemeyer.
- Wei, X.Q.** 2000. Multilevel Exemplification in Active Bilingual Learner's Dictionaries. *Lexicographical Studies* 6: 68-75.
- Welker, H.A.** 2010. Dictionary Use: A General Survey of Empirical Studies. Brasília: Eigenverlag.
- Xie, X.Y.** 2014. *The Evaluation of Online English-Chinese Dictionaries*. Unpublished M.A. thesis. Shanghai, China: Fudan University.
- Xu, H.** 2012. Decoding and Encoding Functions of Examples in English Learners' Dictionaries: A Case Study of the Exemplification of the Word "Monopoly". *Lexicographical Studies* 2: 33-39.
- Yang, S.M.** 2017. Effects on English Learning of Online Dictionaries---Taking *Youdao Dictionary* and *Kingsoft Powerword* for Example. *Journal of Hainan Radio and TV University* 2017(1): 114-117.
- Zhang, H.P.** 2014. *ICTCLAS2014* (Institute of Computing Technology, Chinese Lexical Analysis System) [Computer Software]. Beijing, China: Chinese Academy of Science. Available from <http://ictclas.nlpir.org/downloads>.