Construction of a Tool for the Identification of Electronic Dictionary Users' Skills: Test Specification and Content Validity

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Abstract

The present paper reports results regarding the development and validation of the Strategy Inventory for Electronic Dictionary Use (S. I. E. D. U.), which is a reliable 5-Likert scale self-report instrument consisting of 59 Questions for assessing users' skills and strategies in online electronic dictionary searches. Following Gavriilidou's (2013) Strategy Inventory for Dictionary Use (S.I.D.U.) structure for assessing dictionary use strategies, the S.I.E.D.U includes five subscales: a. Dictionary use awareness skills, b. Dictionary selection strategies, c. Strategies for lemmatization and acquaintance with dictionary conventions, d. Navigation skills and e. Look-up strategies in the new electronic environments. The method of multiple judges was adopted for the control of content validity of the pilot version of S.I.E.D.U. The Cronbach Alpha coefficient was employed in order to provide a measure of the reliability of S.I.E.D.U. Internal consistency of the five subscales and the overall scale of the S.I.E.D.U. ranged from good to excellent.

Keywords: online dictionary; electronic lexicography; dictionary strategies; dictionary reference skills; instrument validation

1   Introduction

Various studies have shown that the use of a dictionary is a complex process and therefore a good user should have a number of different skills in order to be efficient in understanding and producing texts and improve his/her vocabulary (Fraser 1999; Scholfield 1999; Elola, Rodrıguez-Garcıa and Winfrey 2008, Gavriilidou 2013). This is true, not only in the case of printed dictionaries, but also in that of electronic ones, since modern reference tools require the development of new skills for their successful and efficient study.

However, the research activity for the skills required in the case of electronic means is very limited, as pointed out by Lew (2013b). In fact, little is known about the behaviour and preferences of users of electronic dictionaries, while there are no valid and reliable tools for recording users' psychometric characteristics when selecting and using dictionaries.

The aim of the present paper is to present the steps followed for the creation of a reliable tool, the Strategy Inventory for Electronic Dictionary Use (S. I. E. D.U.), which is to be used for the evaluation of skills that users should have so that a successful search in online dictionaries could take place. More specifically, the purpose of the current presentation is to provide data about the S. I. E. D. U.'s test specification and content validity.

2   The Construction Steps

2.1 Test Specification

For the instrument test specification, we chose to adopt Gavriilidou's (2013) methodology which consisted in consulting all previous literature investigating dictionary use strategies and reference skills in detail and make an exhaustive list of reference skills of the successful user of electronic dictionaries. The term *electronic dictionaries* is used in this paper as an umbrella-term in order to denote all types of non-printed dictionaries (e.g. on-line dictionaries, dictionaries in CD-ROM, etc.). There is a substantial body of research on the characteristics of good dictionary users or the strategies required for an effective dictionary look-up, especially in the case of printed dictionaries (for a detailed presentation see Gavriilidou 2013). Therefore there was a careful detection of information presenting detailed descriptions or taxonomies of the reference skills prior to, during and after the dictionary consultation that was relevant in both electronic and printed dictionaries.

For example, Nesi (1999: 54) stated that the user has to decide on the need to use a dictionary or adopt other strategies such as guessing from context. They should have a certain amount of knowledge of the grammatical rules of a language and be aware of a dictionary's structure and lay-out (Scholfield 1982; Bogaards 1994). In addition, a person in need of a dictionary has to be able to find the proper entry or the right subdivision of an entry and then retrieve the specific piece of information they need (meaning, spelling, pronunciation etc.) distinguishing relevant from irrelevant information (Bejoint 1981). The need of reducing multiple senses of polysemous words by elimination and understanding the definition of the unknown word, as well as phonetic symbols, grammatical information, derivative words, idiomatic expressions etc. is strongly emphasized (Lew and Galas 2008). The role of the socio-cultural context in understanding and correctly interpreting meanings is also examined. Finally, according to Roberts (1997) [as cited in Gavriilidou 2013: 4], success lies not only in finding the appropriate information, but also in achieving the goal in the shortest period of time.

However, the skills necessary for the use of modern digital dictionaries are not necessarily the same as those of traditional print dictionaries. Some skills – as described above – may be transferred to digital products, but others are no longer relevant, because the electronic dictionaries may do part of user's job (Lew, 2013a: 79). For example, they can automatically reduce an inflected form to a citation form or present compound words or idioms without having to search for each main element. Furthermore, the users may find the appropriate entry without having adequate knowledge of alphabetic sequencing or have the possibility to use more than one dictionary at once (Bejoint 1981, Atkins & Varantola 1998, Nakayama & Osaki 2008 in Ronald 2008).

On the other hand the use of digital media, as stated by some scientists, requires new reference skills, which were not known while using printed dictionaries. More specifically:

Students need personal judgment and thinking when choosing the lexical sources online (Rothenberg 1997). Apart from the reliability of the sources, the acquisition of computer skills, such as vocabulary reading through pop-up windows, clicking some buttons etc. should not be neglected (Koren 1997). The Internet with the wealth of information and its non-linear presentation of data compels students not to follow a predetermined path but develop navigation skills across and within different lexical entries via hyperlinks (Lee 2000, Winkler 2001cited in Petrylaitė et al. 2008: 79). Therefore, skills in windows switching and searching as well as lexical capabilities such as skimming and scanning are required (Krajka 2007, Tan 2009).

Engelberg & Lemnitzer (2009) (cited in Lew 2013b: 23) reported different search techniques while using electronic dictionaries. They talked about Incremental search, Wildcard search, Boolean search, Filtered search, Sound search, Fuzzy-spelling search, Inflected form search, External-text-based search, Scanner-based search, Index-based search and Picture-based search. As Lew (2013b: 23) mentions, apart from the two final techniques which apply to print dictionaries, the rest are exclusively digital.

Pastor & Alcina (2010: 11-14) listed other possible search techniques in electronic dictionaries too. More precisely the types and subtypes they discerned fell into the following categories: 1) an exact word, 2) a partial word, 3) an approximate expression, (inflectional form, or spelling similarity), 4) an anagram, and 5) a combination of two or more words. Their classification also divided the resource or specific sections that contain searchable information into four types: 1) entry field, 2) content field, 3) thematic field index, and 4) external links access field.

On their part, Szczepaniak and Lew (2011: 340) asserted the value of illustrations in presentation of complex, abstract phenomena or idiomatic words and their effect in retention. Images as well as charts, tables, photographs, sound recordings or menus (Lew 2011) may be extremely useful in promoting learning, but they certainly constitute different ways of extracting information, making thus necessary the development of different capabilities and decoding skills on behalf of the user.

Finally, Lew (2013b: 20) reported that it is necessary to be aware of the hyperlinks in various dictionaries, whereas Hargittai (2005: 377) highlighted the need for familiarity with the Internet terminology so that navigation in the electronic media could be more effective.

After consulting the above literature thoroughly, an exhaustive list of reference skills was created and was used as a basis for item writing.

2.2 Item Writing

Taking into account:

a) all the previous information, the definition of strategic dictionary use, the appropriate reference skills in print dictionaries and the new possibilities offered by the new media and

b) researchers' suggestions about item construction (Alderson et al. 1995, Davidson & Lynch 2002, Spaan 2006), 74 items were written down in Greek. There was made a great effort to include a wide variety of strategies, to use clear and unambiguous wording and to have enough representative items, in the Likert scale format.

The structure of Gavriilidou's (2013) S.I.D.U for printed dictionaries was adopted in the construction of S.I.E.D.U. In S.I.D.U for printed dictionaries, the principal component analysis revealed four factors: Dictionary use awareness skills, Dictionary selection strategies, Strategies for lemmatization and acquaintance with dictionary conventions, and finally Look up strategies. For S.I.E.D.U., a fifth category of items was *a priori* added, after the consultation of the relevant literature. This category was named 'Navigation skills'. Therefore, S.I.E.D.U's pilot V1 items were distributed in five main categories: a. Dictionary use awareness skills (Questions 1-21), b. Dictionary selection strategies (Questions 22-38), c. Strategies for lemmatization and acquaintance with dictionary conventions (Questions 39-51), d. Navigation skills (Questions 52-59), and e. Look-up strategies in the new electronic environments (Questions 60-74) (see Annex I).

This pilot version was then checked for content validity.

3 Content Validity

In order to measure content validity, we preferred to use the method of multiple judges, which is not new in the literature (Hambleton & Rogers 1991, Haynes et al. 1995). For this purpose, 8 experts were asked to judge the relevance and usefulness of each one of the 74 items of our questionnaire. They were University Professors with a long experience in dictionary compilation and specialized in Lexicology or Language Teaching or Lexicographers. They also had appropriate knowledge in the field of Computerized Lexicography and were aware of the varied possibilities offered by the new means.

These experts were kindly asked to select whether an item was "essential" (circle 1), "useful but not essential" (circle 2) and "not necessary" (circle 3). Only items considered "essential" by more than half of our experts were kept. In this way items 17, 21, 28, 33, 38, 39, 45, 51, 52, 53, 57, 60, 62, 70, 71 with poor evaluation were removed (see ANNEX I) and the final version consisted of 59 items (Percentage 79,7%) (see ANNEX II). Four alterations also occurred based on experts' feedback on the wording used, the adequacy of the items checked and their representativeness. In this way a pilot V2 version of 59 items was formed.

The distribution of items in pilot v2 is as follows: a. Dictionary use awareness skills (Questions 1-19, total items 19), b. Dictionary selection strategies (Questions 20-33, total items 14), c. Strategies for lemmatization and acquaintance with dictionary conventions (Questions 34-43, total items 10), d. Navigation skills (Questions 44-48, total items 5), and e. Look-up strategies in the new electronic environments (Questions 49-59, total items 11).

4 Reliability

4.1 Sampling

To estimate S.I.D.U.'s reliability, the sample consisted of 120 university students of the Department of Greek of Democritus University of Thrace in the academic year 2015-2016.

4.2 Measures

The Cronbach Alpha coefficient was employed in order to provide a measure of the reliability of S.I.E.D.U. The Cronbach Alpha coefficient for the total scale was .92 suggesting an excellent degree of internal consistency of the overall instrument. Computed values of the Alpha coefficient for Dictionary use awareness skills was .88, Dictionary selection strategies was .74, Strategies for lemmatization and acquaintance with dictionary conventions was .78, for Navigation skills was .79 and for Look-up strategies in the new electronic environments was .68.

5 Discussion

The present paper reports findings regarding the validity and reliability of the newly developed Strategy Inventory for Electronic Dictionary Use which is written in Greek and which includes five sub-scales: a. Dictionary use awareness skills, b. Dictionary selection strategies, c. Strategies for lemmatization and acquaintance with dictionary conventions, d. Navigation skills, and e. Look-up strategies in the new electronic environments.

The purpose of developing the S.I.E.D.U was to provide a-simple-to-administer and reliable instrument for assessing strategic use of electronic dictionaries. The internal consistency of the

overall scale of the S.I.E.D.U. was found to be excellent. The internal consistency of the five subscales ranged from acceptable to good (George & Mallery, 2003).

The major application of S.I.E.D.U is assessing the electronic dictionary use strategies employed by adults in order to collect reliable data for the design of syllabi for dictionary use training. Furthermore, it can be used as an instrument for sample normalization in research focusing on the effect of dictionary in text production or vocabulary acquisition.

6   Limitations - Further Research

This study has its limitations. More testing with a larger amount of samples is needed in order to check test-retest reliability and discrimination validity of the instrument. These measures are in progress. An exploratory Factor Analysis in also needed in order to check the construct validity of the instrument. Finally, a confirmatory Factor Analysis is needed in order to check the five subscales proposed for the instrument. The final version of S.I.E.D.U. is expected to be ready for use by the end of 2017.

7   References

Alderson, J. C., Clapham, C., Wall, D. (1995). *Language test construction and evaluation.* Cambridge: Cambridge University Press.

Atkins, B.T.S. (1996). Bilingual Dictionaries. Past, Present and Future. In Gellerstam, M., J. Jarborg, S-G. Malmgren, K. Noren, L. Rogstrom, C. Rojder Papmehl. Eds. *Euralex '96 Proceedings*. Göteborg: Göteborg University, pp. 515-546.

Atkins, B. T. S., Varantola, K. (1998). Monitoring dictionary use. In Atkins, B. T. S. (ed.). *Using dictionaries: studies of dictionary use by language learners and translators.* Tübingen: Niemeyer.

Bejoint, H. (1981). 'The Foreign Student's Use of Monolingual English Dictionaries: A Study of Language Needs and Reference Skills'. *Journal of Applied Linguistics*, II.3: pp. 207–222.

Bogaards, P. (1994). 'Tuning the dictionary to the skills of intermediate learners'. *Fremdsprachen Lehren und Lernen*, 23: pp. 192–205.

Davidson, F., Lynch, B. K. (2002). *Testcraft: A teacher's guide to writing and using language test specifications*. New Haven: Yale University Press.

Elola, I., Rodríguez-García, V., Winfrey, K. (2008). 'Dictionary use and vocabulary choices in L2 Writing'. *Estudios de linguistic Inglesa applicada*, 8: pp. 63–89.

Engelberg, S., Lemnitzer, L. (2009). *Lexikographie und Wörterbuchbenutzung*, 4th edition. Tübingen: Stauffenburg Verlag.

Fraser, C. (1999). 'The Role of Consulting a Dictionary in Reading and Vocabulary Learning'. *Canadian Journal of Applied Linguistics*, 2.1–2, pp.73–89.

Gavriilidou, Z. (2013). Development and validation of the Strategy Inventory for Dictionary Use (S.I.D.U), *International Journal of Lexicography*, 22 (2), pp.135-154.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.

Hambleton, R. K., Rogers, H. J. (1991). 'Advances in criterion-referenced measurement'. In R. K. Hambleton and J. N. Zaal (eds.), *Advances in educational and psychological testing*. Boston, MA: Kluwer Academic Publishers, pp.3–44.

Hargittai, E. (2005). Survey Measures of Web-Oriented Digital Literacy. *Social Science Computer*

Review. 23(3), pp.371-379.

Haynes, S. N., Richard, D. R., Kubany, E. S. (1995). 'Content validity in psychological assessment: A functional approach to concepts and methods'. *Psychological Assessment*, 7: pp. 238–247.

Koren, Sh. (1997). Quality versus Convenience: Comparison of Modern Dictionaries from the Researcher's, Teacher's and Learner's Points of View, *The Internet TESL Journal*, vol.2, no.3.

Krajka, J. (2007). Online Lexicological Tools in ESP – Towards an Approach to Strategy Training. *Scripta Manent*, 3(1), pp. 3-19.

Lee, K. (2000). English Teachers' Barriers to the Use of Computer-Assisted Language Learning, *The Internet TESL Journal*, vol. VI, no.12. [Accessed at: http://iteslj.org/Articles/Lee-CALLbarriers.html]. [01/11/2015].

Lew, R. (2011). Online dictionaries of English, in Fuertes-Olivera, P.A., Bergenholtz, H. (eds.), *e-Lexicography: The Internet, Digital Initiatives and Lexicography*. London/New York: Continuum, pp. 230-250.

Lew, R. (2013a). 'From paper to electronic dictionaries: Evolving dictionary skills' in Kwary, Deny Arnos, Nur Wulan and Lilla Musyahda (eds.), *Lexicography and Dictionaries in the Information Age. Selected papers from the 8th ASIALEX international conference*. Surabaya: Airlangga University Press, pp.79–84

Lew, R. (2013b). 'Online dictionary skills' in Iztok Kosem, Jelena Kallas, Polona Gantar, Simon Krek, Margit Langemets and Maria Tuulik (eds.), *Electronic lexicography in the 21st century: Thinking outside the paper. Proceedings of the eLex 2013 conference, 17-19 October 2013, Tallinn, Estonia*. Ljubljana/Tallinn: Trojina, Institute for Applied Slovene Studies/Eesti Keele Instituut, pp. 16-31.

Lew, R., Galas, K. (2008). 'Can dictionary use be taught? The effectiveness of lexicographic training for primary school level Polish learners of English'. In E. Bernal and J. DeCesaris (eds.), *Proceedings of the XIII EURALEX International Congress*. Barcelona: Universitat Pompeu Fabra, pp. 1273–1285.

Lew, R., Mitton, R. (2013). Online English learner's dictionaries and misspellings: one year on. *International Journal of Lexicography*, Vol. 26 No. 2, pp. 219–233.

Nakayama, N., Osaki, S. (2008). Dokkai ni okeru koukatekina denshijissho shidou wo mezashite: jissho skill tokutei no tame no pilot chousa kara. Paper presented at the *2nd Joint Conference on English Lexicography and Vocabulary*, Chiba, Japan.

Nesi, H. (1999). 'The Specification of Dictionary Reference Skills in Higher Education'. In R. R. K. Hartmann (ed.), *Dictionaries in Language Learning. Recommendations*, National Reports and Thematic Reports from the Thematic Network Project in the Area of Languages, Sub-Project 9: Dictionaries. Berlin: Freie Universitaet Berlin, pp. 53–67.

Pastor, V., Alcina, A. (2010). Search techniques in electronic dictionaries: A classification for translators, *International Journal of Lexicography* 23(3), pp. 307-354.

Petrylaitė, R., Vaškelienė D., Vėžytė, T. (2008). Changing Skills of Dictionary Use. Kalbų studijos / *Studies about Languages*, nr. 12, pp. 77–82.

Roberts, R. (1997). 'Using Dictionaries Efficiently'. *38th Annual Conference of the American Translators Association*, San Francisco, California. 20 February 2012.

Ronald, J, Shinya, O. (2008). "The electronic dictionary in the language classroom: the views of language learners and teachers." *Proceedings of the XIII EURALEX International Congress (Barcelona, 15-19 July 2008)*.

Rothenberg, D. (1997). How the Web Destroys the Quality of Students' *Research Papers, Chronicle of Higher Education*, New Jersey.

Scholfield, P. (1982). 'Using the English Dictionary for Comprehension'. *TESOL Quarterly*, 16.2: pp. 185–194.

Scholfield, P. (1999). 'Dictionary Use in Reception'. *International Journal of Lexicography*, 12.1: pp. 13–34.

Spaan, M. (2006). 'Test and item specifications development'. *Language Assessment Quarterly*, 3: pp. 71–79.

Szczepaniak, R., Lew, R. (2011). "The role of imagery in dictionaries of idioms." *Applied Linguistics* 32.3 (2011): pp. 323-347.

Tan, K. (2009). "How effective is the electronic dictionary in sense discrimination?" *Lexikos* 19.1 (2009).

Thornbury, S. (2002). *How to Teach Vocabulary*. Longman.

Winkler, B. (2001). Students Working with an English Learner's Dictionary on CD-ROM, *Information Technology and Multimedia in English Language Teaching conference*, Hong Kong.

ANNEX I: Pilot V1 of S.I.E.D.U.

1	I use an electronic dictionary to find the meaning of a word.	1	2	3	4	5
2	I use an electronic dictionary to find the meaning of an expression.	1	2	3	4	5
3	I use an electronic dictionary to find the spelling of a word.	1	2	3	4	5
4	I use an electronic dictionary to find grammatical information (for example part of speech).	1	2	3	4	5
5	I use an electronic dictionary to find the syntax of a word.	1	2	3	4	5
6	I use an electronic dictionary to check the way a word or expression is used.	1	2	3	4	5
7	I use an electronic dictionary to find synonyms.	1	2	3	4	5
8	I use an electronic dictionary to find antonyms.	1	2	3	4	5
9	I use an electronic dictionary to find the derivatives of a word.	1	2	3	4	5
10	I use an electronic dictionary to find compound words.	1	2	3	4	5
11	I use an electronic dictionary to find word families.	1	2	3	4	5
12	I use an electronic dictionary to find the origin of a word.	1	2	3	4	5
13	I use an electronic dictionary for the translation of a word.	1	2	3	4	5
14	I use an electronic dictionary when I read a text.	1	2	3	4	5
15	I use an electronic dictionary when I write a text.	1	2	3	4	5
16	I use an electronic dictionary when I do exercises (e.g. in grammar) or research.	1	2	3	4	5
17	I use an electronic dictionary when I face difficulties in my oral communication with other people.	1	2	3	4	5
18	When I have linguistic queries during my entertainment (e.g. while playing games with friends, listening to music, watching TV, etc.)	1	2	3	4	5
19	I use an electronic dictionary in my workplace (school, university etc.)	1	2	3	4	5
20	I use an electronic dictionary at home.	1	2	3	4	5
21	I use an electronic dictionary on the road (while in motion).	1	2	3	4	5
22	I know what an online dictionary is.	1	2	3	4	5
23	I know what an electronic dictionary in a mobile phone or tablet is.	1	2	3	4	5
24	I know what an electronic dictionary in DVD-ROM or CD-ROM form is.	1	2	3	4	5
25	I use online dictionary available without subscription.	1	2	3	4	5

26	I use online dictionary available by subscription.	1	2	3	4	5
27	I use an electronic dictionary in DVD-ROM or CD-ROM.	1	2	3	4	5
28	I use an electronic dictionary in a mobile phone or tablet.	1	2	3	4	5
29	Before I buy an electronic dictionary, I know the reason I need it (the needs that may be satisfied).	1	2	3	4	5
30	Before I buy an electronic dictionary, I ask to know about its content (what information it provides).	1	2	3	4	5
31	Before I buy an electronic dictionary, I consult my teacher.	1	2	3	4	5
32	Before I buy an electronic dictionary, I ask my friends.	1	2	3	4	5
33	To purchase an electronic dictionary, I get influenced by the media (e.g. TV, internet, newspapers etc.).	1	2	3	4	5
34	I choose an electronic dictionary, because it has a lot of entries and a lot of information in each entry.	1	2	3	4	5
35	I choose an electronic dictionary, because it contains many multimedia applications (video, audio, etc.) and is most impressive.	1	2	3	4	5
36	I use an electronic dictionary to look for the desired information more quickly (compared with a print dictionary).	1	2	3	4	5
37	I use an electronic dictionary to find more easily the information I want (compared with a print dictionary).	1	2	3	4	5
38	I use an electronic dictionary for the status I get.	1	2	3	4	5
39	Before using my new electronic dictionary, I carefully read the instructions (of installation, navigation etc.).	1	2	3	4	5
40	Before using my new electronic dictionary, I carefully study the list of abbreviations (if there are any).	1	2	3	4	5
41	Before using my electronic Dictionary, I study the information describing the structure of the dictionary and its entries.	1	2	3	4	5
42	Before using my electronic Dictionary, I browse the webpage to understand its main structure.	1	2	3	4	5
43	When listening to a word I do not understand, I think of its various spelling possibilities and look it up in the dictionary.	1	2	3	4	5
44	When listening to a word I do not understand, I look it up even without knowing the proper spelling, utilizing the «Did-you-mean?» function of my electronic dictionary.	1	2	3	4	5
45	I choose the auto-completion of a term (from the index of entries available in my electronic dictionary) before completing my typing.	1	2	3	4	5
46	When I cannot find a word in the dictionary, I start a new search using other criteria.	1	2	3	4	5
47	When the electronic dictionary has little or dubious information, I look for/I resort to a printed dictionary.	1	2	3	4	5
48	To check the pronunciation of a word / phrase while speaking, I use the application of synthesized speech or recorded pronunciation of my electronic dictionary.	1	2	3	4	5
49	I use the option "History" to have access to the most recent searches I carried out.	1	2	3	4	5
50	I use the option "Help" to solve questions and problems I may encounter.	1	2	3	4	5
51	I use the Notepad of my electronic dictionary (when available) to record the information of the entry I am interested in.	1	2	3	4	5
52	I know how to turn on/off the computer or electronic device where the dictionary is.	1	2	3	4	5
53	I know how to handle the keyboard and mouse function (e.g. move the mouse, place the cursor over a link until it changes format etc.).	1	2	3	4	5
54	I know how to install an electronic dictionary in DVD-ROM into my computer.	1	2	3	4	5
55	I can find the dictionary I am looking for by typing a specific URL or using a search engine (e.g.	1	2	3	4	5

Google).

56	I can understand which the hyperlinks of a lexicographical entry are and what they refer to.	1 2 3 4 5
57	I navigate easily between different websites / windows in the internet.	1 2 3 4 5
58	I use the links to consult the word entry or have more information about it.	1 2 3 4 5
59	I navigate/ browse easily between different parts of lexicographical data.	1 2 3 4 5
60	I use keyboard shortcuts and search tools for accelerating lexical searches online.	1 2 3 4 5
61	I choose to look up a word in the dictionary when I cannot understand its meaning from context.	1 2 3 4 5
62	When I look up a word, I constantly bear it in mind during the search.	1 2 3 4 5
63	In order to search quickly for a word, I write down (in the search box of my online dictionary) keywords which are more relevant to the data of my research.	1 2 3 4 5
64	To search for a word in an online dictionary, I use wildcards [e.g. question mark (?), dot (.), asterisk (*), plus (+), percent (%)].	1 2 3 4 5
65	To search for a word in an online dictionary, I perform a Boolean search (using AND, OR , NOT).	1 2 3 4 5
66	To find groups of words in an online dictionary, I attempt filtered search e.g. by part of speech, field, frequency of use, etc.	1 2 3 4 5
67	To find a word in an online dictionary, I attempt inflected form search.	1 2 3 4 5
68	To find a word in an online dictionary, I attempt sound search.	1 2 3 4 5
69	To find a word in an online dictionary, I try the list of a menu or select the first letter using the mouse.	1 2 3 4 5
70	To search for a word in an online dictionary, I use links to move to other external documents / dictionaries/ websites.	1 2 3 4 5
71	I know how to make a search based on images.	1 2 3 4 5
72	When I realize that the word I am looking for has various different meanings, I go through them all one by one, assisted by the example sentences.	1 2 3 4 5
73	When I find the word that I was searching for, I return to the text to confirm that the word matches the context.	1 2 3 4 5
74	Before using a word found in the dictionary in a text, I look up all the grammatical information (inflection system, syntactic details) and usage information, to make sure that I use it correctly.	1 2 3 4 5

ANNEX II: Pilot V2 of S.I.E.D.U.

1	I use an electronic dictionary to find the meaning of a word.	1 2 3 4 5
2	I use an electronic dictionary to find the meaning of an expression.	1 2 3 4 5
3	I use an electronic dictionary to find the spelling of a word.	1 2 3 4 5
4	I use an electronic dictionary to find grammatical information (for example part of speech).	1 2 3 4 5
5	I use an electronic dictionary to find the syntax of a word.	1 2 3 4 5
6	I use an electronic dictionary to check the way a word or expression is used.	1 2 3 4 5
7	I use an electronic dictionary to find synonyms.	1 2 3 4 5
8	I use an electronic dictionary to find antonyms.	1 2 3 4 5
9	I use an electronic dictionary to find the derivatives of a word.	1 2 3 4 5
10	I use an electronic dictionary to find compound words.	1 2 3 4 5
11	I use an electronic dictionary to find word families.	1 2 3 4 5

12	I use an electronic dictionary to find the origin of a word.	1 2 3 4 5
13	I use an electronic dictionary for the translation of a word.	1 2 3 4 5
14	I use an electronic dictionary when I read a text.	1 2 3 4 5
15	I use an electronic dictionary when I write a text.	1 2 3 4 5
16	I use an electronic dictionary when I do exercises (e.g. in grammar) or research.	1 2 3 4 5
17	When I have linguistic queries during my entertainment (e.g. while playing games with friends, listening to music, watching TV, etc.)	1 2 3 4 5
18	I use an electronic dictionary in my workplace (school, university etc.)	1 2 3 4 5
19	I use an electronic dictionary at home.	1 2 3 4 5
20	I know what an online dictionary is.	1 2 3 4 5
21	I know what an electronic dictionary in a mobile phone or tablet is.	1 2 3 4 5
22	I know what an electronic dictionary in DVD-ROM or CD-ROM form is.	1 2 3 4 5
23	I use online dictionary available without subscription.	1 2 3 4 5
24	I use online dictionary available by subscription.	1 2 3 4 5
25	I use an electronic dictionary in DVD-ROM or CD-ROM.	1 2 3 4 5
26	Before I buy an electronic dictionary, I know the reason I need it (the needs that may be satisfied).	1 2 3 4 5
27	Before I buy an electronic dictionary, I ask to know about its content (what information it provides).	1 2 3 4 5
28	Before I buy an electronic dictionary, I consult my teacher.	1 2 3 4 5
29	Before I buy an electronic dictionary, I ask my friends.	1 2 3 4 5
30	I choose an electronic dictionary, because it has a lot of entries and a lot of information in each entry.	1 2 3 4 5
31	I choose an electronic dictionary, because it contains many multimedia applications (video, audio, etc.) and is most impressive.	1 2 3 4 5
32	I use an electronic dictionary to look for the desired information more quickly (compared with a print dictionary).	1 2 3 4 5
33	I use an electronic dictionary to find the information I want more easily (compared with a print dictionary).	1 2 3 4 5
34	Before using my new electronic dictionary, I carefully study the list of abbreviations (if there are any).	1 2 3 4 5
35	Before using my electronic dictionary, I study the information describing the structure of the dictionary and its entries.	1 2 3 4 5
36	Before using my electronic dictionary, I browse the webpage to understand its main structure.	1 2 3 4 5
37	When listening to a word, I cannot understand, I think of its various spelling possibilities and look it up in the dictionary.	1 2 3 4 5
38	When listening to a word, I cannot understand, I look it up even without knowing the proper spelling, utilizing the «Did-you-mean?» function of my electronic dictionary.	1 2 3 4 5
39	When I cannot find a word in the dictionary, I start a new search using other criteria.	1 2 3 4 5
40	When the electronic dictionary has little or dubious information, I am looking for/I resort to a printed dictionary.	1 2 3 4 5
41	To check the pronunciation of a word / phrase while speaking, I use the application of synthesized speech or recorded pronunciation of my electronic dictionary.	1 2 3 4 5
42	I use the option "History" to have access to the most recent searches I carried out.	1 2 3 4 5
43	I use the option "Help" to solve questions and problems I may encounter.	1 2 3 4 5
44	I know how to install an electronic dictionary on DVD-ROM on my computer.	1 2 3 4 5

45	I can find the dictionary I am looking for by typing a specific URL or using a search engine (e.g. Google).	1	2	3	4	5
46	I can understand which the hyperlinks of a lexicographical entry are and where they refer to.	1	2	3	4	5
47	I use the links to consult the word entry or have more information about it.	1	2	3	4	5
48	I navigate/ browse easily between different parts of lexicographical data.	1	2	3	4	5
49	I choose to look up a word in the dictionary when I cannot understand its meaning from context.	1	2	3	4	5
50	In order to search quickly for a word, I write down (in the search box of my online dictionary) keywords which are more relevant to the data of my research.	1	2	3	4	5
51	To search for a word in an online dictionary, I use wildcards [e.g. question mark (?), dot (.), asterisk (*), plus (+), percent (%)].	1	2	3	4	5
52	To search for a word in an online dictionary, I perform a Boolean search (using AND, OR , NOT).	1	2	3	4	5
53	To find groups of words in an online dictionary, I attempt filtered search e.g. by part of speech, field, frequency of use, etc.	1	2	3	4	5
54	To find a word in an online dictionary, I attempt inflected form search.	1	2	3	4	5
55	To find a word in an online dictionary, I attempt sound search.	1	2	3	4	5
56	To find a word in an online dictionary, I try the list of a menu or select the first letter using the mouse.	1	2	3	4	5
57	When I realize that the word I am looking for has various different meanings, I go through them all one by one, assisted by the example sentences.	1	2	3	4	5
58	When I find the word that I was searching for, I check the text to confirm that the word matches the context.	1	2	3	4	5
59	Before using it in the text I am writing a word found in the dictionary, I look up all the grammatical information (inflection system, syntactic details) and usage information, in order to make sure that I use it correctly.	1	2	3	4	5