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Online Lexicological Tools in ESP – Towards an Approach to Strategy Training

Abstract

Together with great proliferation of online resources on the one hand and a striking lack of commercially published materials for specific ESP domains on the other, the ESP teacher needs to reflect on using Internet materials judiciously in the language classroom. An indispensable element of the teaching process in any context is effective resourcing, or the ability to find, evaluate and use reference tools of various kinds. This strategy is also necessary in the ESP context, and the range of available resources goes beyond dictionaries only and encompasses, among others, specialized dictionaries, glossaries, terminology databanks.

The purpose of the present paper is to outline the procedure of online resourcing, by giving specific steps for the training of the skill based on ESP materials of various types. The theoretical discussion of strategy training will be substantiated with the practical activities for the procedure.

Keywords: CALL, ESP, learning strategy, reference tools.

1. Introduction

Foreign language teaching in the Web-based environment needs to make proper use of freely available tools in order to enrich the range of Internet-mediated tasks and encompass students with a wider repertoire of language-related skills. Creating the learning environment that is rich in resources should be the primary aim of the language teacher, so that the instruction implemented in such a context significantly expands upon learners' skills making them more autonomous, in control of tools, and,

consequently, less dependent on the teacher. Evaluation, selection and use of auxiliary software and online services during such operations as Web-based reading, writing or listening is essential for coping with the materials that are often too demanding linguistically, beyond Krashen's level of i+1. It is especially the management of various processes running simultaneously, with multiple windows opened, and the skilful navigation between these, that needs to be mastered by students and teachers alike.

Reference tools such as dictionaries, glossaries, thesauri, lexical databases and corpora are supplementary resources that can serve the teacher to construct vocabulary or grammar discovery tasks, pre-reading brainstorming for vocabulary or post-listening and pre-speaking revision of lexis on a given topic. 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.

Owing to a great number of online dictionaries of varying degree of expertise and exhaustiveness, teachers need to be informed about specific reference tools to be distinguished from a plethora of resources, especially that only some may be unique for specific features (e.g., phonetic display, pronunciation recordings, lexical relations, visual representation of related words or downloadable dictionary modules). However, one cannot take for granted that the learning strategy of resourcing in the online environment will be a simple transfer of the skills activated by learners in print sources consultation. On the contrary, the specificity of Internet-based learning context poses additional demands on learners as for the skills to be acquired – for instance, as far as modes of access are concerned.

With that in mind, one needs to envisage a carefully designed strategy training programme, the example of which is presented in the present paper. After discussing major types of ESP reference tools, such as specialized dictionaries, glossaries and terminology databanks, and after reviewing major guidelines for strategy training, we will give a staged procedure of introducing learners to online ESP lexical resources in sample activities.

2. Online reference tools for strategy training

Given the abundance of reference tools available on the Web, one might take for granted that students will use and benefit from online electronic dictionaries. However, the question is whether learners are able to make the most of these essentially target language tools to add to the effectiveness of their own learning without actually being

helped. As demonstrated by the study of Sobkowiak (2002), teachers' knowledge of and attitudes towards electronic dictionaries in general, and online reference tools in particular, influence the use of the tool in the learning process, and to actually become independent users of the language learners need to be instructed in the strategy of online resourcing.

It goes without saying that the knowledge of and familiarity with reference tools enables language teachers not only to expand their own lexicon as a form of self-development, but, more importantly, serves as a useful source of data for vocabulary-oriented classroom activities. As for English for Specific Purposes courses, the knowledge of the vocabulary in a specialized discipline becomes, after all, an extremely crucial matter in teaching a foreign language, as even in mainstream teaching the cross-curricular approach of using language as a tool to conduct cross-curricular projects plays a prominent part. Thus, some attention in the present paper needs to be devoted to specialized reference tools available on the Web, such as specialized dictionaries, glossaries and terminology databanks.

2.1 Reference tools for ESP: specialized dictionaries, glossaries and terminology databanks

To begin with, the basic distinction between dictionaries, glossaries and terminology databanks needs to be highlighted. A general language dictionary, either monolingual, bilingual or multilingual, is a reference tool containing the general language words often selected on the basis of frequency counts, with only the most basic coverage of specialized disciplines. Even though it may enable decoding of some specialized vocabulary items, it is not actually possible to use general dictionaries to extract specialized vocabulary for a given topic in the encoding process. As one can imagine, for the obvious reasons of space, traditional dictionaries can contain only a limited amount of specialized vocabulary, a fact also determined by the relatively low frequency of such terms.

A specialized dictionary is a transitional tool, a kind of dictionary that covers a relatively limited set of phenomena, usually focusing on linguistic and factual matters of a particular subject field. Nielsen (1990) divides these into multi-field dictionaries (covering several subject fields such as science), single-field dictionaries (focusing on one particular subject field such as law) or sub-field dictionaries (dealing only with a certain part of the field, such as contract law). Another classification provided by Nielsen (1990) is the division into maximizing dictionaries, which attempt to achieve comprehensive coverage of the terms in a certain subject field, or, on the other hand, minimizing dictionaries, trying to cover only a limited amount of specialized vocabulary.

The sample structure of a Language for Specific Purposes dictionary is described by Nielsen (2002), who elaborates upon all the decisions and dilemmas involved in creating such a reference tool.

Another kind of reference tool is a glossary, an alphabetical list of defined terms in a specialized field. Depending on the kind of a glossary, either only the simplest meanings of the simplest concepts can be provided, or, on the other hand, a glossary can be much more comprehensive in containing also more specific items, explanations, pictures and diagrams. In contrast to a dictionary, it is no longer word frequency which is the criterion according to which the word is included in the tool, therefore, low-frequency words are given ample attention in a glossary, the purpose of which is to provide as accurate and detailed a picture of a given discipline as possible.

The use of some of the glossaries can greatly enhance the language classroom, where the glossary can serve as input for language activities, the source of materials for classroom hunts, a model for writing tasks, a support tool for a given lesson point. Each of such resources could serve as sample material to construct vocabulary tasks of various kinds, interwoven with the instruction on reading, listening or speaking skills in the Web-based environment. A greater number of specialist glossary resources on various subjects can be found at any of the following glossary portal sites: The Free Dictionary, Logos Linguistic Glossaries, Glossarist, Language Automation Glossaries, Frank Dietz's Glossaries, Peter Spitz's translation links, Encyberpedia, OneLook: All dictionary sites, A Web on Online Dictionaries, Lost in Babel – Specialised Dictionaries, Multilingual Specialized Dictionaries on the Internet or Dictionary.com.

Terminology databanks are the final type of resource useful for vocabulary development in specialized areas. An example of this group, IATE (Inter-Active Terminology for Europe), is a database covering a broad spectrum of knowledge, particularly rich in technical and specialized terminology (agriculture, telecommunications, transport, legislation, finance) related to EU policy, updated with new data added by terminologists, translators, linguists. The important distinctive feature of terminology databases is advanced searching, with the selection not only of source and target language(s), but also a subject field, display type, etc. Contrary to privately-published specialized dictionaries or glossaries, official terminology databases are not only under the process of expansion, but also their reliability is assured by the owner institution (e.g., the European Commission, the World Trade Organisation or the International Monetary Fund). Some freely available official terminology databanks are the following: IATE; Terminological Information System; UNTERM United Nations Multilingual Terminology Database; FAOTERM (UN Food and Agriculture Organisation terminology database); IMF Terminology (A Multilingual Directory of the International Monetary Fund); Termite 6L (Terminology of Telecommunications database in 6 languages); TERMPOST (the terminology database of UPU - Universal Postal Union); UNESCOTERM (the UNESCO terminology database); EEA (European Environment

Agency - multilingual environment glossary); ONTERM (Ontario government's bilingual terminology); Term Bank of The Finnish Centre for Technical Terminology.

2.2 Corpora and concordancers

Crystal (1991) defines a corpus as "a collection of linguistic data, either written texts or a transcription of recorded speech, which can be used as a starting-point of linguistic description or as a means of verifying hypotheses about a language". In a similar vein, Sinclair (1991) adds that corpora are made of naturally occurring language, while Krishnamurthy (2001) points out the genuine communicative situations that are recorded without any editing to create corpus contexts. In terms of ESP instruction, the importance of specialised corpora lies mainly in providing reliable language data from a given discipline, thus providing important support for the teacher.

The availability of ready-made corpora for widespread and unlimited pedagogical use by ESP teachers has largely increased recently, together with the popularization of the Internet and open source software movement (Tribble, 1997). The sample resources listed in the appendix may serve as a good starting point for ESP teachers to introduce the elements of corpus linguistics in their teaching. On the one hand, ready-made representative general English corpora may be used for general language development, as well as to guide learners to discovering grammar. On the other hand, specialised corpora covering a particular discipline (e.g., telephone conversations, business letters, EU legislation, culinary, ecotourism, computer and environmental protection texts, European Parliament session transcripts) may be used for providing language data for in-class teaching.

A viable alternative for ready-made corpora resources can be custom-made collections, compiled by ESP teachers with the use of online texts in response to the specific needs of a particular teaching context (Lee, Swales, 2006). Such 'do-it-yourself corpora' will be an indispensable solution when specific needs of students cannot be satisfied by the above-listed ready-made resources, when representative corpora contain relatively little coverage of specialist areas or text types (Tribble, 1997), or when the teacher aims at enhancing the classroom with the language of a particular domain, geographical area or register.

2.3 A general dictionary expandable with downloadable modules

The main objection to traditional general dictionaries, be they print or CD-ROM based, is that they have little (if any) capacity to add new entries, meanings, examples, and

hence remain uncustomized failing to reflect the specific needs of users. In fact, this problem has most probably caused enormous proliferation of glossaries on the Web, as dictionary users were unable to find specialized vocabulary in their reference tools. Thus, the combination of both, a general dictionary module and a specialized glossary, selected and added to by the user, could be the future of dictionary use.

This approach is represented by Babylon, a downloadable dictionary installed on the computer's hard disc, residing in the memory and activated with the keyboard combination. Apart from using the general language dictionary in the off-line mode (without the Internet connection), the user can access a number of glossaries submitted by Babylon users to the website. The Babylon glossary database covers a wide range of professional and interest fields, as well as a number of language combinations, while the fact that the user can both download a given glossary for off-line use or subscribe to it for online use makes it flexible enough to suit the user's preferences. To see the list of glossaries, go to Babylon website and click "Browse the dictionaries and glossaries index" at the bottom of the page, or use the following direct link.

3. Strategy training in the EFL literature

As advocated by many authors (Wenden and Rubin, 1987, Oxford, 1990, O'Malley and Chamot, 1990, Wenden, 1998), language learning strategies of different types (cognitive, metacognitive, social, communication, socioaffective, depending on the classification), by raising learners' awareness, promoting self-directed learning and exploiting both implicit and explicit aspects of the learning process, can lead to making students better learners, have a compensating effect for less able or less effective learners, and create necessary conditions for learner autonomy. Resourcing, or finding, evaluating and using different lexical tools available online, is one of the cognitive learning strategies, namely steps or operations used in learning or problem-solving that require direct analysis, transformation or synthesis of learning materials. Its implementation in the foreign language classroom effectively changes the language testing situation into the language teaching one, with the important role of teacher-directed strategy training as an indispensable step towards building up a successful learner.

Strategy training is the activity that should find its place in the foreign language classroom. Demonstrating new strategies, evaluating the outcome of the activity with and without strategy use, the observation of the activity process are all operations that add to learner awareness. Here two approaches for strategy training can be outlined:

1. Oxford (1990):

- ask learners to do a language activity without any strategy training;
- have them discuss how they did it and ask them to reflect on how the strategies they selected may have facilitated the learning process;
- suggest and demonstrate other helpful strategies and consider ways that they could include new strategies in their learning repertoires;
- allow learners ample time to practise the new strategies with language tasks;
- show how the strategies can be transformed to other tasks;
- provide practice using the techniques with new tasks and allow learners to make choices about the strategies they will use to complete the task;
- help students understand how to evaluate the success of their strategy use and to gauge their progress as more responsible and self-directed learners.

2. O'Malley and Chamot (1990):

- **Planning**: The instructor presents students with a language task and explains the rationale behind it. Students are then asked to plan their own approaches to the task, choosing strategies that they think will facilitate its completion.
- **Monitoring**: During the task, students are asked to 'self-monitor' their performance by paying attention to their strategy use and checking comprehension.
- **Problem-solving**: As they encounter difficulties, learners are expected to find their own solutions.
- **Evaluation**: After the task has been completed, students are then given time to 'debrief' the activity, e.g. evaluate the effectiveness of the strategies they used during the task.

To these models, Dickinson (1987) adds two main areas of preparation for strategy training, which are to lead to self-directed learning: psychological preparation (i.e. building confidence to work independently of the teacher) and methodological preparation (i.e. acquiring the necessary abilities and techniques for such activities as self-evaluation). All of these need to be addressed in teacher-directed instruction, skillfully interwoven with regular subject matter teaching.

The awareness of the need for the implementation of strategy training along the lines outlined above is becoming an inherent feature of English language teaching, as represented in the attempts to include strategy training elements in ELT coursebooks (see, for instance, New Opportunities series by Pearson Education). Even though language learning strategies are becoming a much better researched area, there is a particularly urgent need to formulate practical realisations of the theoretical assumptions. Thus, specific learner training proposals, especially ESP-related, will need to be put forward, for instant implementation in the classroom.

4. Online resourcing – a proposal for strategy training

When compared with print dictionary consultation, using online reference tools demands even greater amount of knowledge and skills, which need to be transferred to students in a series of classroom tasks. After all, as Walz (1990) puts it, the dictionary is the essential source of information about words and it can be a tool for lifelong learning since students will add to their vocabulary throughout their entire lives. Walz argues that teachers should skillfully direct the use of monolingual and bilingual dictionaries so that students learn how to use them in a judicious manner, finding correct meanings and equivalents.

When dealing specifically with online dictionary training, Koren (1997) advocates training the students in dictionary use by showing them what each dictionary can give them, what it cannot, and what its most efficient use is. As the electronic dictionary requires different skills or habits than those enforced by the print dictionary – 'computer skills' - the tasks provided need to pass on the habit of seeing information pop up after clicking some buttons without really having to search, as well as more standard dictionary skills like skimming and scanning.

A systematic approach to training students in the use of CD-ROM dictionaries, which can be adapted to online reference tools as well, is described by Winkler (2001). The tasks had two main purposes: to evaluate the effectiveness of the sample dictionaries on CD-ROM as reference/language learning tools and to reveal English-learners' skills in using such dictionaries. It is crucial to note that before working on the tasks, students were given a dictionary tour to highlight the main facilities of the dictionary on CD-ROM, pointing out the various sections of the dictionary as well as the specific search facilities and features, further illustrated by carefully chosen look-ups. Winkler concludes that in order to make effective use of the tool, users need to be familiar with its contents (for example, by being introduced to the dictionary through a tour) and also need to understand how an individual dictionary entry is organised and what information can be found in it.

An interesting, though challenging, approach to electronic dictionary use is represented by Campoy Cubillo (2002), who aims to teach dictionary skills through dictionary compilation, with students creating their own ESP dictionary entries.

What follows below is the discussion of the strategy training procedure, with learners first introduced to the basics of dictionary use, then taken through the more advanced features to build their language awareness and provided with the skills necessary to perform Web-based self-directed learning in the future. The training approach to the strategy of online resourcing in ESP should take as its starting point simple lookup, parallel to the use of general English reference tools, in order to familiarise learners with the basic operations and queries. Together with growing competence in the area, students could be instructed in formulating more complicated queries, using more specialised resources, in this way making greater use of the already familiar tools. Another line of training, represented prominently in the activities outlined below, involves increasing students' awareness of the nature of the reference resources used, to highlight the distinction between ESP tools of various kind (glossaries, terminology databanks, specialist dictionaries corpora), between parallel ESP tools and general English tools, between resources prepared with learners in mind and resources made available for translators. Finally, as seen in activity 4.2., the important skill to be passed on to students is the ability to evaluate online resources, analyse the URL of the site to find out the private, institutional or governmental character of the site, recognise the authority of the institution and notice possible inaccuracy of the material.

4.1 Introduction to dictionary use

The process of training learners in resourcing should commence with exposure to the most standard examples of specialized dictionaries and glossaries, the ones that most closely resemble the print aids students may be familiar with, yet at the same time ought to highlight some of their advantages enumerated above. Thus, the collections of thematic resources such as Glossarist, Language Automation Glossaries, Frank Dietz's glossaries, Peter Spitz's translation links or Encyberpedia could be used to highlight the distinction between a specialized dictionary and a glossary, shed light on various features of reference tools, teach students how to make use of various functionalities.

Activity 1

Students choose five recently learnt words from a specialist area. They go to the resource sites of specialized dictionaries given above, find the specific area and try to look up the words in different reference tools listed. Learners compare them taking into account the type of information the entries provide, the multimedia capabilities, the ease of use, the navigation, the speed of operation, the amount of ads, linking to other resources and any other features.

4.2 Reference tools evaluation

An indispensable element of instructing ESP students how to use reference tools effectively is comparing and evaluating various available resources. Thus, they need to learn how to balance the criterion of price (e.g., Babylon glossaries vs. publicly available glossaries), authority (individual-made vs. institutional), ease of operation, integration with other dictionaries (e.g., achieved in Babylon glossaries), retrieval (whether the glossary can be saved locally for future off-line use), currency, scope (number of entries and definitions), and many others.

Activity 2

Learners go to Babylon's glossary list, choose their discipline of interest and view the glossary information available. Then compare the types of tools with the glossaries available freely on the Web in the glossary directories listed above.

4.3 Metadictionary access

Certain reference sites (especially OneLook Dictionary and Dict) allow users to search for the entries or occurrences of the word in many dictionaries, giving the output in the form of information coming from different resources. A similar idea is used in the dictionary program Findictionary (see Shesen, 2001), which searches a variety of reference tools categorized in certain disciplines (medical, law, search engines, general English, language study). Thus, the importance of metadictionary search tools is for ESP students to learn how to use different reference sources to get comprehensive

Activity 3

Students are asked to select a few familiar words. Then they are guided to one or two metadictionaries to see what specialized meanings they can have in the area of the discipline studied (e.g., business, arts, law or medicine). Then they report the findings to the class, giving examples of sentences using those familiar words in completely new meanings.

word information – not only the L1 equivalent, but also example sentences, contexts, collocations or etymology. The importance of tasks focusing on metadictionary tools lies also in having students learn to evaluate and select reference tools.

4.4 Specialized reference tools (acronyms, abbreviations, text shorthand)

At different moments of the learning process, there may arise a need for more specialized reference tools, which would actually provide either encoding or decoding in the areas of language not frequently used yet necessary at the moment. Such areas may be various kinds of non-standard, abbreviated language, used either for brevity of expression in colloquial speech within a particular area (e.g., business transactions or 'office speak') or to denote specific institutions, organizations or concepts from a related discipline. Here again the essential skill that learners need to grasp in the resourcing training procedure is to know where to look for reference tools for a particular aim, as well as how to browse them effectively. Depending on the type of site, learners will either use the 'Search' box to start the searching facility, or, alternatively, will use the 'Find' feature on their Internet browsers to spot relevant acronyms in the page currently displayed. What is also important in learner training as demonstrated in Activity 4 is that students become involved in materials development, so that they not only learn how to decode messages but also encode them on their own. For that aim, the following reference tools can come in useful:

- Internet language and text messaging expressions: Netlingo; Internet Acronym Dictionary; Webopedia; Netdictionary; Netlingo's Dictionary of Internet terms; Dictionary of Text Messaging; Internet Slang Dictionary and Translator.
- Acronyms and abbreviations: Acronym Finder; Acronym Search; Acronyms and Abbreviations; Acronym Guide.

Activity 4

Students go to Netlingo and its section on text messaging language ("Text Shorthand", or directly, as well as to an acronym database relating to their discipline (Acronym Finder, or some of the terminology databanks listed above). In pairs they create a message using as many different abbreviations and expressions as possible. Then they pass it on to another pair who needs to use the reference tools given to decode it.

4.5 Exploring lexical relations

Thanks to hypertextuality and cross-referencing, it has become possible to provide

users with a range of lexical relations not accessible to ordinary dictionary users. Meronyms (parts of X), hypernyms (X is a kind of Y), hyponyms (Y is a kind of X), holonyms (X is a part of Y), synonyms, derivationally related forms, all grouped by familiarity or estimated frequency, can be explored with lexical databases, with WordNet being one of the most distinguished examples. WordNet is a semantic lexicon for the English language, grouping words into synonym sets (synsets) and recording various lexical relations. ESP students need to see how the specific language items are interconnected, and judicious use of the WordNet lexical database, combined with a general English dictionary or a bilingual specialized dictionary may expand learners' range of expression. Obviously, a prerequisite for the activity below is in-class training in some of the lexical semantics terminology (meronyms, holonyms, hypernyms, etc.)

Activity 5

Students choose some of the words recently learnt in their ESP classes, go to WordNet and see if they can find their lexical relations. Then they are asked to prepare the examples of words to the class in the form of a semantic map (see Visual Thesaurus, for an example).

4.6 Finding contexts in authentic subject matter documents

A major shortcoming of glossaries and specialized dictionaries is that they usually focus on equivalents or definitions, but may lack a sufficient number of sentence examples to demonstrate the use of particular lexical items. This problem could be amended by introducing students to the basic concordancing procedures, done without any particular software but only the 'Find' feature of their Internet browsers. Having looked up a word, students go to a materials repository characteristic for their discipline (e.g., one of the European Commission's databases, see for the list) to search them for relevant documents to be used for contexts. Once such basic procedures are instilled in students, the teacher could proceed to a more systematic ESP corpus compilation and text analysis with freely available concordancing tools.

Activity 6

Students choose a few words recently learnt in their ESP classes, go to a selected materials repository (e.g., EUR-Lex legislation database) and use its search facility to find relevant texts (both pdf and html). Then students open them and use the 'Find' or 'Search' functionalities of either Acrobat Reader or Internet browser to find contexts of a particular word.

5. Conclusion

In conclusion, as language is in the constant process of change, foreign language teachers need to be familiar with a plethora of reference tools to continually work on their own vocabulary development. This is especially true with ESP instructors, whose specialized areas may well lack adequate coverage in general dictionaries. The Internet, with its multitude of sites and resources, opens up interesting opportunities for ESP, as teachers may exploit not only specially prepared specialized dictionaries and glossaries, but also use terminology databanks or subject matter repositories to seek language data. The strategy of resourcing, or finding and using relevant reference tools effectively, is one of the most essential learner skills, and as such needs to be promoted by conscious and staged instruction.

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Appendix: Sites enumerated in the text

1. Glossary portal sites:

The Free Dictionary (http://www.thefreedictionary.com/)

Logos linguistic glossaries (http://www.logosdictionary.com/pls/dictionary/linguistic_resources.main?lang=en&source=resources)

Glossarist (http://www.glossarist.com)

Language Automation glossaries (http://www.lai.com/glmain.html)

Frank Dietz's glossaries (http://frankdietz.com/glossary.htm)

Peter Spitz's translation links (http://home8.inet.tele.dk/p-spitz)

Encyberpedia (http://www.encyberpedia.com/glossary.htm#glossaries)

OneLook: All dictionary sites (http://www.onelook.com/?d=all_&v=&sort=&langdf=all)

A Web on Online Dictionaries (http://www.yourdictionary.com/specialty.html#table)

Lost in Babel – Specialised Dictionaries (http://www.webpersonal.net/dmarques/resources/dic5.htm)

Multilingual Specialized Dictionaries on the Internet (http://web.ticino.com/multilingual/Dictionaries_specialized_multi.htm)

Dictionary.com (http://dictionary.reference.com/others/).

2. Terminology databanks:

IATE (http://iate.europa.eu/iatediff/)

Terminological Information System (http://tis.consilium.eu.int/utfwebtis/frames/introfsEN.htm)

UNTERM United Nations Multilingual Terminology Database (http://157.150.197.21/dgaacs/unterm.nsf)

FAOTERM, UN Food and Agriculture Organisation terminology database (http://faoterm.fao.org/)

IMF Terminology, A Multilingual Directory of the International Monetary Fund (http://www.imf.org/external/np/term/index.asp)

Termite 6L, Terminology of Telecommunications database in 6 languages (http://www.itu.int/terminology/index.html)

TERMPOST, the terminology database of UPU (Universal Postal Union) (http://www.upu.int/termpost/en/)

UNESCOTERM, the UNESCO terminology database (http://termweb.unesco.org/)

EEA (European Environment Agency) multilingual environment glossary (http://glossary.eea.eu.int/EEAGlossary/)

ONTERM, Ontario government's bilingual terminology (http://www.onterm.gov.on.ca/searchtempl.asp)

Term Bank of The Finnish Centre for Technical Terminology (http://www.otalib.fi/tkk/tepa/search.html).

3. Specialized reference tools:

Internet language and text messaging expressions:

Netlingo (http://www.netlingo.com/)

Internet Acronym Dictionary (http://www.gaarde.org/acronyms/)

Webopedia (http://www.webopedia.com/)

Netdictionary (http://www.netdictionary.com/)

Netlingo's Dictionary of Internet terms (http://www.netlingo.com/emailsh.cfm)

Dictionary of Text Messaging (http://www.webwasp.co.uk/define/SMS-text/s/index.php)

Internet Slang Dictionary and Translator (http://www.noslang.com/).

Acronyms and abbreviations:

Acronym Finder (http://www.acronymfinder.com/)

Acronym Search (http://www.acronymsearch.com)

Acronyms and abbreviations (http://acronyms.thefreedictionary.com/)

Acronym Guide (http://www.acronym-guide.com/).

4. Freely available corpora:

Full versions of specialist corpora with unlimited access

MICASE Michigan Corpus of Academic Spoken English (http://www.hti.umich.edu/m/micase/)

International Corpus of Learner English – Polish section, (http://ifa.amu.edu.pl/~kprzemek/concord2advr/search_adv_new.html)

Official demonstration versions of established corpora, usually with only basic keyword search facilities

British National Corpus (http://sara.natcorp.ox.ac.uk/lookup.html)

Collins COBUILD Bank of English (http://www.collins.co.uk/Corpus/CorpusSearch.aspx)

Full access custom-made interfaces to established corpora developed by researchers

VIEW Variation in English Words and Phrases (http://corpus.byu.edu/bnc/)

Brown Corpus (http://www.lextutor.ca/concordancers/concord_e.html, http://www.edict.com.hk/concordance and http://www.ldc.upenn.edu/cgi-bin/ldc/textcorpus?doc=yes&corpus=BROWN)

Lancaster-Oslo-Bergen Corpus (http://www.edict.com.hk/concordance)

British National Corpus (http://www.lextutor.ca/concordancers/concord_e.html)

Corpora compiled of selected works of the English literature, such as Alice in Wonderland, The Lord of the Rings, Call of the Wild or Sherlock Holmes stories

Online Concordancer (http://www.lextutor.ca/concordancers/concord_e.html)

Web Concordancer (http://www.edict.com.hk/concordance)

Corpora compiled of newspaper articles and television news transcripts, also based on current issues of online newspapers

Online Concordancer (http://www.lextutor.ca/concordancers/concord_e.html)

Web Concordancer (http://www.edict.com.hk/concordance)

GlossaNet (http://glossa.fltr.ucl.ac.be/scripts/gtoday/gtoday.pl)

Reuters Corpora (http://trec.nist.gov/data/reuters/reuters.html)

Learner corpora

PICLE (Polish International Corpus of Learner English)
(http://ifa.amu.edu.pl/~kprzemek/concord2advr/search_adv_new.html)

Online Concordancer (http://www.lextutor.ca/concordancers/concord_e.html)

Web Concordancer (http://www.edict.com.hk/concordance)

Thematic corpora

telephone conversations (http://www.ldc.upenn.edu/cgi-bin/lol/swb/speechcorpus?&corpus=swb)

business letters (http://ysomeya.hp.infoseek.co.jp/)

EU legislation (http://logos.uio.no/opus/)

culinary, ecotourism, computer and environmental protection texts
(http://www.nilc.icmc.usp.br/cortec/ibusca.php)

European Parliament session transcripts (Europarl)
(http://people.csail.mit.edu/koehn/publications/europarl/).