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Designing Internet Dictionaries

Abstract

The design of internet dictionaries roughly falls into two categories: built from the ground up and converted from print. Whereas the former often shows little influence from the hands of the lexicographer the latter proves that printed and electronic publishing require very different design solutions. Unfortunately, this has not yet been brought to the attention of the publishers. The article will try to explain this on the basis of a critical examination of two internet dictionaries, neither of which are overly convincing in their approach.

Sadly, there are still publishers who believe that they can publish a proper internet dictionary by converting the digital form of a printed dictionary directly onto the internet and slapping a search engine on top of it. Such publishers usually work on the assumption that by showing off the printed design on screen potential customers will be compelled to buy the book. They will not. An internet dictionary is a work in its own right. As a marketing strategy this will fail simply because users will be disappointed. Reading type on screen is very difficult since no screen has the same light reflection capacity of white paper nor the resolution to match print. In fact reading on screen is comparable to reading a newspaper under a 25W bulb – adequate for small passages but not for intense reading. Designing an internet dictionary is wrought with the same amount of problems as designing a printed dictionary. Unfortunately, most of the design decisions differ fundamentally which leads to assumptions of the aforementioned kind. Whatever thought and consideration the lexicographer puts into the printed output of

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his labour will have to be reconsidered from the ground up when the dictionary is going to be published on the internet. The reason for this lies in one word: accessibility.

Form and Function

As stated in Almind/Bergenholtz (1990, 31), (2000, 259) the form of a given dictionary follows its function. The arguments for that truism are based on designing dictionaries in print where all aspects of design can be controlled. For a printed dictionary they still hold true but they must be amended for internet publications. On the internet any or all decisions concerning fonts, font-sizes, colour, background and page size, are void beyond the designer's browser. And even if a given home-page is tested on more than one standard browser configuration we can only test the pages on a limited number. The moment the user down-loads our page we can hope that more than 50 percent of our design is displayed as intended on the computer screens of our users. In conse-quence the truism that form follows function becomes rhetorical since it lies outside the lexicographer's control.

In print the publisher can demand the lemma to be set in 9,76pt Helvetica Neue semi-bold condensed. Similar decisions are made to the format of the media itself (the book) and its page layout (the columns). Web design on the other hand is very much the art of compromise. The web designer defines individual objects just as precise but must bear in mind that they will be interpreted more loosely by the client browser. Formatting the page boundaries will depend on the receiving screen size and its resolution. Thus, the above definition ends up being interpreted more along the lines of, »whenever possible let the lemma be displayed in the font, size and colour defined. Meet as many of the definitions as possible. Should none of it be met default to sans-serif, rather large and in bold.« Most colours (background, field, text etc.) will display but almost never the way they display natively. This is mainly due to differences in hardware. Many computers are being sold bundled with cheap screens and/or graphic cards or are set to lower resolution and/or fewer colours. Therefore, colours are rendered differently and allowances must be made thus the colours in use should be far apart in contrast. There is a defined set of so called »web-safe« colours in every professional web design application. All colours must adhere to them.

Functionalities

Insisting to define form is a loosing battle. Concentrate in stead on what can be controlled: the dictionary's functionality. The speed and precision with which the user retrieves data is the reason why even internet dictionaries with sub-standard content are successful. Concentrate on the primary advantage of publishing on the internet: the search engine. Giving access to powerful search-functions is essential to a dictionary's success. Content is important but many excellent dictionaries are avoided simply because they have cumbersome user interfaces, are cluttered with adverts, have slow search engines, or display illegible results. The following table summarizes the demands a user makes towards a functioning dictionary:

Demand	Solution
An internet dictionary must be easy to find	Make sure your dictionary has a simple internet-address. If you have more than one dictionary acquire more internet-addresses and create multiple home pages.
The search field is the centre of attention	Let the search field be visually centred near the top of your home page.
Readable articles	Use colours sparingly and keep the "good" colours for important data. Black on white is good. Red on blue is not. Contrast is your friend. Put each piece of information on its own line and use headings prudently.
Instant results	Keep your database and web pages small and your servers large.
Simple results	Show only a limited amount of results 5 to 10 per page depending on the overall size of the dictionary's articles. This reduces clutter and lets the user know that he should refine his search.
Reduce the number of results	Sometimes users test a dictionary by searching for all words containing an "e" or similar. These requests are hardly based on a genuine wish to solve a given linguistic problem. If a search results in a ridiculously large number of returns let the user re-define the search.
Advanced searches	If possible let the user refine his search by searching both lemma and specific elements such as collocations or by searching within the found set of articles.
Display the results logically	Is an alphabetical sorting really informative? How about sorting by word length or by relevance? Consider giving alternatives to the default sort especially when displaying the results of advanced searches.

Is a search field really necessary?	Sometimes in small specialised dictionaries it would be better to give the user a list of all articles in stead of a search mechanism. This simplifies the web page and improves caching of often used articles.

The remark about alternative sorting may need elaboration. Few may agree that there is an alternative to an alphabetically sorted list of articles. Nevertheless, I argue that it is necessary to find alternatives for two reasons: (1) a search resulting in only five or ten short articles is not very difficult to overlook and not sorting that list frees server processing time for other more demanding tasks, and (2) it is not uncommon especially in internet searches to sort a given result by relevancy since alphabetical sorting on such large results is meaningless in most cases. Relevancy in the case of advanced searches could be to display all articles that contain all search parameters, for instance lemma and collocation, up front and those only containing the lemma further down followed by those only containing the collocation. This is just a sketchy suggestion, and alphabetical sorting is very often necessary but letting a user do multiple searches within a large first result is a much better tool for finding the solution to their current problem. The time saved browsing through 100 articles five, ten, or twenty at the time will easily make up for the extra time spent refining a search. A refined search thus necessitates the »Advanced search« option advocated for in the above table. Alphabetical sorting is »traditional« and it is difficult to think of alternatives but consider the usefulness of the tradition carefully. The computer really is much more up to the task of locating complex data structures than the alphabet is. Even the lemma itself may prove to be superfluous when it comes to displaying a result on screen.

Help texts are important for the non-professional user. Let synonyms, antonyms, collocations and similar parts of an article be labelled clearly not with symbols but with proper headings. Let each heading be defined in the dictionary itself but also by linking it to a definition in the user's guide which of course is one of the not to be forgotten texts the user can find on the site. In theory a web page can hold an infinite number of texts and explanations just as the database can hold an infinite number of articles. There is no need to leave out a user's guide just because the publisher considers his audience to be specialised users who certainly know how to interpret the data because most users will most likely not

know how to do that. A simplified user's guide should be provided. It explains to the user the basics on how to use the search mechanism and what results to expect from it. Let the user know who published the dictionary. Name, title, organisation are all important to legitimise the dictionary. Supply an email-address for the users to suggest corrections, point out deficiencies or to vent grievances on why the dictionary is inaccessible. Answering these emails gives you a loyal albeit critical audience from which you can draw no end of positive knowledge on how to improve both data and system.

The scope of this article presumes a constructive criticism of Finnish internet dictionaries. At www.yourdictionary.com you can find and browse through twelve Finnish internet dictionaries but neither yourdictionary.com nor Google-searches provided any publicly available Finnish bi-lingual general language dictionaries that contain much more than a given equivalent for each lemma. Half of the dictionaries provide a search engine or database access: the ENGLISH-FINNISH-ENGLISH ONLINE DICTIONARY, the FINNISH-ENGLISH-FINNISH JAVA DICTIONARY, the FINNISH-RUSSIAN DICTIONARY, the ENGLISH-FINNISH-SWEDISH MATHEMATICS DICTIONARY, the FINNISH-VEPS-KARELIAN-ESTONIAN ONLINE DICTIONARY, and the SKOLVERKET SWEDISH-FINNISH DICTIONARY (please refer to their individual links by accessing the yourdictionary.com homepage), whereas the other half are lists of simple articles mostly even without definitions or synonyms. It is odd that a country priding itself in being one of the most computerised countries in the world cannot provide its population with a single dictionary that goes beyond simple word lists. My choice, therefore, fell on a Swedish internet dictionary that is both free and of some lexicographical standard: the LEXIN SVENSK-FINSKT LEXIKON. It will be compared to a reference dictionary DEN DANSKE NETORDBOG which itself has a number of shortcomings. The text focuses on three key elements: accessibility, speed and legibility of the resulting articles.

Den Danske Netordbog (the Danish General Language Dictionary/NetDOB)

DEN DANSKE NETORDBOG has been created, designed and is maintained by the Centre for Lexicography at the Aarhus Business School in Denmark. The database contains approximately 125.000 records covering some

107.000 articles. Each article can contain grammar, definition, sub lemma (as polysemes), collocations, synonyms, antonyms, word forms, idioms, and proverbs. Cross-references to other articles are provided where applicable. The database's physical size is 120MB. To make sure the database delivers results to its users quickly it resides on a dedicated server with another server serving the web pages.

DEN DANSKE NETORDBOG (the Danish General Language Dictionary/ NetDOB) and its siblings, DEN DANSKE IDIOMORDBOG (the Danish Dictionary of Idioms/NetIDIOM), DEN DANSKE REGNSKABSORDBOG (the Danish Dictionary of Accounting Terms/NetIAS-DK) and DEN DANSK-ENGELSKE REGNSKABSORDBO*g* (the Danish-English Dictionary of Accounting Terms/NetIAS-DKGB) all share the same overall design. They all have different internet addresses but reside on the same server. The sites share as many HTML-pages as possible which reduces maintenance considerably. Furthermore, the NetDOB and the NetIDIOM share the same database which makes it easier to update the dictionaries. The same structure applies to the NetIAS-DK and NetIAS-DKGB. Changes made in the databases are reflected immediately on the internet.

Entering the internet-address www.dendanskenetordbog.dk brings the user to the main site. All pages on the server are divided into the same four parts: the static parts **header**, **footer**, and **navigation menu** and the dynamic **data** part. Unlike most other sites this is not accomplished through the use of frames which otherwise makes it easy to globally update static elements like the navigation menu. However, this approach gives access to a wider range of browsers and reduces screen update time on the user's computer. The downside is that changes to the static parts must be made across the site's more than 60 pages.

Header and footer contain the name of the dictionary, and the logo, address, and link to the homepage of the Aarhus Business School. The navigation menu contains links to a user's guide and information about origin, composition, and maintenance of the dictionary, as well as a list of literature about lexicography (downloadable as PDF-documents) and a contacts page. At the end of the menu are links to the other dictionaries hosted by the Centre for Lexicography. There are no links to external dictionaries, although, such links should be provided. The dynamic **data** part of the home page itself contains a **greeting** and a **search field**

which is selected and ready for input. The greeting is mainly used to advertise new dictionaries or to provide messages from the host master concerning technical issues.

Once the user has loaded the homepage the search field is selected automatically. He then enters a string of letters hits the return key and waits for the result. Search times are less than six seconds at peak load but usually less than 3 seconds even through 56Kbit connections. In theory the database is capable of serving up to 5.000 requests per second but in reality this load will never be reached. To let the user know that the search is in progress a message appears letting him know that should the search last longer than 5 seconds he can click a given link to re-initiate the search. Usually this is only necessary during data collision caused by busy internet connections. The reason that such short search

times are possible lies in the use of an extensive cache. Despite the considerable number of records in the database only very few of them are actually being looked-up. Less than 15.000 in fact. Most of these are stored dynamically in a cache on the server.

The search field lets the user choose between searching for the exact string or any lemma beginning with, containing, or ending with the search string. The string itself is looked up in a search field of the database that contains the lemma and its variants thus searching for an exact string of letters will always give larger results than expected. The search mechanism then validates the string. If the result is larger than 100 articles the user is asked to refine the search. Otherwise the results are shown alphabetically sorted by lemma, homonym and polyseme five articles per page.

The results page contains the same static information. The data part now contains a search field and the articles. Each article is ordered in a table for greater accuracy and control and can contain any or all of the following components formatted as follows:

Lemma	14 px Verdana bold, black, offset 18 px to the left of the remaining data
Grammar	14 px Verdana italic, black, following the lemma on the same line, line break at max width of table, links to user's guide: hover dark grey, underlined
Polyseme (incl. Sub-Lemma)	14 px Verdana, black, first line below grammar
Definition	12 px Verdana, black
Collocation	12 px Verdana, black
Synonym	12 px Verdana, black, links to other articles if applicable: hover dark grey, underlined
Antonym	12 px Verdana, black, links to other articles if applicable: hover dark grey, underlined
Example	12 px Verdana, black
Word Formation	12 px Verdana, black, links to other articles if applicable: hover dark grey, underlined
Idiom	12 px Verdana, black, definition in parenthesis preset with an equal-sign
Proverbs	12 px Verdana, black
Links to related home pages	12 px Verdana, black
Headers	12 px Verdana, blue, links to user's guide: hover underlined

Notice that the size of the typography in web pages is measured in pixels (*px*) rather than points (*pt*) which would be the traditional measurement of typographical size in print. The primary font in use is Verdana a sans-serif font installed in most computers as part of the Windows operating system and on the Macintosh as part of the Microsoft Office Suite. There is therefore a good chance that most users see the typography as specified. Choosing a relatively simple sans-serif font increases legibility on screen which is in contrast to most studies of printed typography. Sans-serif fonts are simpler with all lines of the letter having the same thickness (weight) whereas serif fonts tend to clutter lines with their serifs especially on lower screen sizes decreasing legibility due to screen resolution deficiencies.

The layout decisions concerning header, footer, and navigation menu have been imposed from outside sources. Even though some of the choices have been debated extensively it seems as if the overall design is being well received by most users. In fact, many first time users consider it to be elegant and pleasing. User satisfaction on this very subjective level may be considered superfluous but a dictionary lives off its readers and having them return simply because they »like the way it looks« is an important factor to consider.

For technical reasons articles containing polysemes are divided into separate articles one for the lemma and its conjugation and one for each following polyseme still containing the lemma but without its grammatical information. Each article is set apart from the next by a discreet grey line. Lexicographical elements within the article are set apart from each other by blue headers and written on separate lines with the exception of the grammar part which resembles traditional printed layout in dictionaries. No truncation is allowed, i.e. collocations, word forms or other information containing the lemma are written in full without the substitution of the lemma-string with a tilde contrary to the tradition in printed dictionaries that rely on this feature to reduce the physical size of the bound volume. The only exception to the rule is the grammar part where the lemma is replaced with a hyphen because the constant repetition of the lemma disguises the information the dictionary wants to convey. All headers automatically show a brief explanatory text and are links to the appropriate place in the user guide should a user want to know more about their interpretation. There is a tradition on the internet to underline links to other documents. Underlining also causes text to

be hard to read especially in lists. For these reasons links in this diction-
ary are not underlined until the cursor »hovers« above it.

Above and below the results are shown links for loading the next or
previous five articles or any set of five articles in between. Choosing
this approach to navigating these often very large articles is impractical.
For most searches this may be negligible but in the case of the word
gå (walk) the search returns the lemma and 64 polysemes spanning 13
pages. The user has no clue to where the answer to his question lies and
has to browse most if not all of them.

This problem should be addressed either by giving the user a list of
all found lemmas so that he can jump to the one in question or to let the
user search within the found set of articles in any or all parts of each
(definition, collocation, synonym, antonym, etc.). Also, the user could
be given the option to see more than five articles at a time but this only
reduces the number of pages and doesn't actively support the user in
his search. Bringing this approach to its ultimate conclusion, i.e. a full
list with all article components visible, is not very useful, either. The
alternative is to present a synopsis of each article, for instance only
the lemma and all polysemic definitions. But not all polysemes contain
definitions. Most are in fact defined through their synonyms and other
information. In the case of NetDOB the data structure does not allow
for lists.

A refined list reducing the found set of data is by far the best approach
but also the one demanding most resources both concerning server
strength and programming effort and is not likely to be implemented
in the near future.

The lack of advanced search capabilities in the dictionary is an over-
all problem but navigating the dictionary is not as primitive as cursory
glances may suggest. In fact the editors and programmers have imple-
mented a very useful feature inside the articles themselves. Each of the
synonyms, antonyms, and word formations that are present in the dic-
tionary as independent articles are in fact links to these articles. Click-
ing them performs a search that results in the article in question. In the
near future this will also become a feature for idioms where a click on
a given idiom will perform a search in the NetIDIOM a parallel dic-
tionary based in full on the contents of the NetDOB. Already, the re-
verse connection is made: a given idiom in the NetIDIOM contains

links in the idiom itself that points to articles in the NetDOB. Such cross-referencing between seemingly independent dictionaries is an appropriate use of the electronic media and should be considered wherever possible. As a final note it is worthy to mention that the new NetIAS-DK, a specialised dictionary of accounting terms based on the IAS/IFRS-norm links to the NetDOB wherever possible to give the user the option to look up the layman's definition of a given term. This in part to help understand the often very complicated definitions that are inherent in a specialised dictionary.

The NetDOB tries its best to make use of the possibilities of the electronic media but doesn't fully exploit the strengths of the underlying database. It lacks many advanced search capabilities and has flaws in its search engine which could easily be dismissed were it smaller than it is. Its very size, the reason why it is considered one of the best public dictionaries available, is its weakness and it is obvious that much work lies ahead. Its strength lies in its speed and accessibility herein also counting the many typographical considerations that have been taken into account. It proves that many »laws« and traditions of typography have to be broken when displaying data on screen since studies based on printed layout are clearly misguiding when applied to web pages. The article structure on the other hand should be reconsidered once new search capabilities are at hand. A more radical approach could be to split the dictionary into several minor ones interconnected through links. In so doing, a user searching a dictionary containing only grammar could be led to another dictionary containing collocations by clicking the appropriate link.
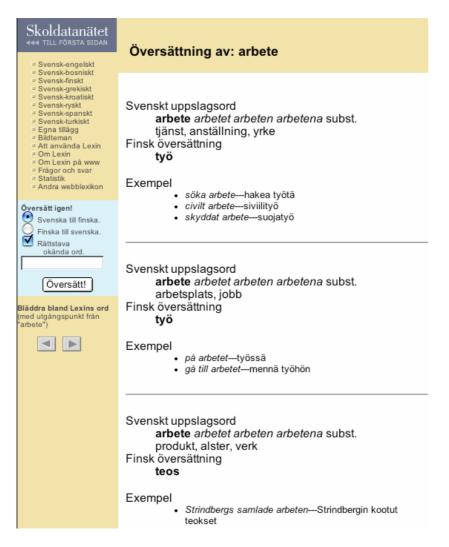
Lexin svensk-finskt lexikon (Lexin)

Under the heading LEXIN – ETT LEXICON FÖR INVADRARUNDERVISNING (Lexin – a dictionary for the education of immigrants) we find a set of bi-lingual dictionaries with language pairs from Swedish (L1) to any of the following languages: English, Bosnian, Finnish, Greek, Croatian, Russian, Spanish and Turkish (L2). At first glance the dictionaries presume to be bi-directional but, an L2-search results in Swedish lemmas with their foreign language equivalents and not, as expected, foreign language lemmas with Swedish equivalents. It is, however, stated on

the front page that the option to make an L2-search is a service beyond the original function of the dictionary.

The LEXIN is part of an internet forum for learning the Swedish language hosted on the *Skoldatanät* (the Swedish Schoolnet) under the auspices of the *Myndigheten för skolutveckling* (the Agency for School Improvement). The site hosts a number of illustrations thematically ordered into groups like *family, the human body, clothing, music and instruments, etc.,* various educational services, a test area, discussion forums, and other education tools. An English version of the site is provided. The SVENSK-FINSKT LEXIKON (Swedish-Finnish dictionary) is only a part of the site and is defined as a combination of lexicon and dictionary with a vocabulary of approx. 30.000 »words«. The dictionary is set to be a tool in the language education of foreign speakers with little or no foreign language skills, i.e. immigrants.

The main page is divided into four parts, three static parts **header**, **footer**, and **navigation menu** and the dynamic **data** part. The header holds the logo of the *Skoldatanätet* (the Swedish Schoolnet) and a link to the home page, the footer holds mail addresses to the editor and to the webmaster and the text *myndigheten för skolutveckling* (Agency for School Improvement). The navigation menu contains links to the aforementioned language pairs, the very extensive user's guide, a statistics page showing the monthly use of the dictionaries, the educational forums, and links to five other dictionaries on the internet and a link to yourdictionary.com under the heading *Lista över tusen lexikon för olika språk* (List of a thousand dictionaries of various languages). The data part contains a search field and options for searching in either the Swedish lemmas or their Finnish equivalents.

The results page repeats these page elements with the addition of a similar although condensed search field at the end of the navigation menu. Below that are a pair of arrows for browsing the dictionary forwards and backwards starting with the current article. All found articles are displayed on one page. At the bottom is a box with a link to how to interpret the result and an option to add the found articles to a personal list.

Activating this feature gives the possibility to return to this and other sets of articles during further searches.

Entering the search string *arbete* (work) results in 4 articles which are in fact polysemes to *arbete*. Each article can contain conjugation, definition, the Finnish equivalent, examples (collocations) and word formations and their respective Finnish equivalents and translations. Hanging headers titled **Svenskt uppslagsord** (Swedish lemma)*,* **Finsk översätning** (Finnish equivalent)*,* **Exempel** (example)*,* and **Sammansätningar/avledningar** (word formations) divide the groups of information. Although the hanging headers make very good separations they create an unnecessary large distance between the article parts. Headers and body text share the same typographical definitions except for bold and italic. Each article is separated from the next by a horizontal line across the article's width. The overall typography is black on a white background with the static page elements black on a light grey background. The font is defined as sans-serif and rather large.

This site, however, shows clearly how difficult it is to make sure the user gets the result the designer expects. It is only under Microsoft Explorer that any font information actually gets passed through. Mozilla/ Netscape, for instance, ignores it and sets it to its own default values which happens to be Times New Roman. The following description is based on using the dictionary with the MS Explorer browser.

The Swedish lemma is set in bold. Italicised on the same line we find conjugation and word class, the latter in plain text. On the next line, the second most likely spot to find an equivalent, we find a number of synonyms followed by a definition in some articles, also written in plain text. The cursory eye will read these very distinct pieces of information as one which is counter-productive to their function. Keeping this information closely together only serves the purpose to create distance between the lemma and its equivalent. The additional header under which the equivalent is set in bold worsens this condition. Following a blank line a new header introduces examples, and word formations formatted as bulleted lists with the Swedish text italicised followed by three dashes and the Finnish translation in plain text. The distance from the left margin of the table to these lists is longer than in the rest of the page caused by the style definition as bulleted un-numbered lists. No elements of the article are links to other articles or dictionaries.

As mentioned earlier the Lexin sets out to be an aid in language learning for non-Swedish speakers as a lexicon. However, it emphasizes the role of being a lexicon over its potential as a language aid. The layout of the page shows this clearly. The lemma and its equivalent are both set in bold but so far apart as to be virtually impossible to connect intuitively. In order to fulfil its purpose, i.e. providing a possible translation to a given Swedish word, the equivalent should be placed right next to the lemma. Had this be done, the Lexin could still function as a lexicon but the emphasis would now be on the user's point of view, i.e. this word is a problem for the user and this equivalent is its immediate solution, not its conjugation, nor its word class, nor its synonyms. Nevertheless, all these pieces of information are given priority over the equivalent. In order to confuse the user further the conjugations are written in full and italicised, traditionally difficult to read, causing rather large amounts of similar text to be read as if they were a sentence, even though this could easily be on a separate line after the equivalent or placed in parenthesis. Also, the word class should precede conjugation since it gives the user a head start on what to expect from the remainder of the line or it could be written between the lemma and its equivalent.

The use of headings, although advocated for earlier, is being misused in this case simply because they are formatted in the same font, size and colour as the rest of the article. Headings are not part of the information the user seeks but are guides pointing towards it. They should not be emphasized strongly but stay in the background. This can be accomplished by colourizing them either to a colour far from the colour scheme of the site or to a lighter shade of the same colour. Also the choice of the heading need not be in this case **Svenskt uppslagsord** (Swedish lemma) and **Finsk översättning** (Finnish equivalent). the user is well capable of discerning the two. the first heading could be omitted completely and the other could be **Översättning** (equivalent). It would suffice and make it quicker to read thus nearing it its role as a marker, although, it would still be better to move the equivalent closer to the lemma. If the designer insists in setting the font, size and colour the same as the body text, then let a blank line precede it as has been done with the **Exempel** (example) and **Sammansättningar/ avledningar** (word formations) headings.

Considering the layout of the examples, or rather, collocations, other layout decisions have been made that are open for criticism. There are

no spaces between the dashes and the text which seems odd. The dashes themselves and their number seem quite superfluous. One or two at most should be plenty. In fact, setting the Swedish part in italics and the translation in plain text should be ample distinction. If this isn't enough it should be considered to place them underneath each other perhaps even creating distinction by colourizing them. The same of course applies to the formatting of the word forms.

The lack of links from parts of the dictionary to other articles, user's guide, or even illustrations shows that the LEXIN is very far from putting the media to its proper use. It would be easy to link a given lemma to its illustrated counterpart in the **Bildteman** (illustrations) section of the LEXIN and vice versa but this has not been done. In stead looking up the word *ben* (leg) we are given a lengthy description of this obvious part of the human anatomy.

An interesting idiosyncrasy occurs when studying the site's other dictionaries. In all the other dictionaries, except for the Swedish-English and the Swedish-Finnish dictionary, the Swedish lemma is supplied with a pronunciation element. In the case of the Swedish-Turkish dictionary this has even been supplemented with a button that activates a mp3-file speaking the word to the user. Why is this option reserved for this particular dictionary? The designer should be capable of linking this to all dictionary entries across the site. After all the words in use are the same. One might expect more from a programming point of view.

Colourization is often either shied away from or overused the latter causing what is sometimes known as a **circus-layout**. It is a difficult subject especially since colour definitions are device-dependent, that is to say, they depend on the receivers hardware. Nevertheless, used prudently colours can make a world of difference to the user. In the Net-DOB the headings are blue, a colour which is completely outside the site's colour scheme and which has been subject to discussion. It serves its purpose but causes a mild case of the circus-effect mentioned before. Nevertheless, it is not as blatant as some effects can be such as blinking text, coloured table borders, or even java-scripts opening new windows etc. The LEXIN could do with a bit of colour. Just lightening the headings could improve its function considerably.

Conclusion

The two dictionaries mentioned here serve different functions but use the same functionalities. Both have a simple search engine that returns articles in a similar manner, i.e. individual articles and their polysemes are divided by lines, elements by headings and graphical elements are defined within the boundaries of a table. Nevertheless, there is a great difference in the look and feel of them.

NetDOB has put many thoughts into defining its function through the use of graphical elements. Static page elements not directly referring to the content of the result are downplayed whereas the dictionary's content is emphasized in part simply by a larger font size than the rest of the page but also by discreet usage of colour and by using bold and italics only where they emphasize key elements without disturbing the overall legibility of the article. The order in which article elements are displayed in relation to each other and the extensive use of linking elements within each article with other articles both inside the current dictionary but also outside of it is, from the user's point of view, an expected feature that greatly enhances the dictionary's functionality and thus adheres closely to its function. It should, however, be improved by adding the option for refining searches.

The Lexin's function to provide lexical knowledge about the Swedish language to foreign speakers is let down by the graphical decisions made. Important data such as an equivalent are placed far apart from the lemma. It is puzzling to know that one can hear a Swedish word spoken out loud when entering the Turkish base but not when entering the Croatian base. Why the distinction? The added pronunciation seems like an afterthought and this is a flaw in the design of the database itself more than the electronic representation of it and could have been alleviated with proper programming. The Lexin would benefit greatly from having its database redesigned where all the Swedish articles and the pronunciation of its lemmas would reside in one database and all equivalents in others. Linking both through the web page in question would facilitate distributing useful information such as these pronunciations immensely. The same holds true to the image gallery. How much better to let a learner click on a lemma and get a picture in stead of reading through long descriptions.

As a lexicographer it is important to remember the art of abstraction. It is possible through the use of databases to go beyond the boundaries of traditional solutions and to concentrate on how the user gets the information he wants simply by providing him with a proper search engine and by displaying data in a logical and above all legible form. It is also worth considering to let the user be in charge of which parts of an article he wants to see. Some users want grammar others collocations and yet another wants synonyms etc. Monstrous articles are just as hampering as illegible ones.

Literature

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