

Lexique Pro from SIL Mali, West Africa

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The primary functions of Lexique Pro (<http://www.lexiquepro.com>) are to:

- Create a dictionary,
- View and edit an existing Shoebox/Toolbox dictionary database,
- Share a database with other computer users,
- Export a dictionary to print as a text document, or to html format for web publication.

In this review, we first go through the process of setting up Lexique Pro (LPro henceforth) to create a new dictionary.¹ We then look at the somewhat similar process of uploading and editing an existing Toolbox project into LPro. These two sections also describe the problems we encountered, and offer some solutions. The remaining sections review the other two functions of the software: sharing a LPro database with other computer users, and exporting a LPro database to different formats (xml, html, and text).

This review (just like the software) is geared more towards helping beginning lexicographers with moderate computer skills, than professional linguists or highly competent computer users. Note however that LPro uses the SIL Toolbox MDF field markers to classify data. LPro users therefore need to know and understand these field markers.²

1. STARTING A NEW DICTIONARY. We first review the basic set-up process (section 1.1), and then describe additional features that need to be modified, but which do not surface during the basic set-up (section 1.2).

1.1 BASIC SET-UP. Download the software and the user guide (in English or Chinese). [<http://www.lexiquepro.com/download.htm>] After installation, double-click on the LPro icon. Go to *File, Create new lexicon*.

a. In the window *Lexicon language*, enter the language name, and optionally, its SIL code. Use the *Advanced* tab of this window if you wish to share your lexicon with other computer users: your language name will be translated in the specified language (French, Spanish, Portuguese, Chinese, or Kinyarwanda) if the computer interface is in that language. Use the tab *Alternative representation* if there are two or more orthographic representations of the language (such as the Roman and Cyrillic alphabets for Serbian).

¹ We are grateful to Katelyn Anderson for testing this set up, and to Robert Early and Nick Thiemberger for useful comments and suggestions.

² For a list of all MDF markers, go to: http://www.sil.org/computing/shoebox/MDF_AppendixA.html
See also the complete Toolbox guide to dictionary making: http://www.sil.org/computing/shoebox/MDF_2000.pdf

b. The following window *Gloss languages* asks you to choose which language(s) to use for glosses and definitions. If you are creating a multilingual dictionary, and if the languages you use do not appear in the list provided, click on *Other* and add the name of the language(s) you want. In *Language order*, enter the languages in the order you want them to be displayed in the dictionary's entries.

c. Next is *Language details*. If you have a multilingual dictionary, each language will be in a separate tab. In the box *Marker letter* choose the Toolbox field marker associated with the language: *e* for English, *n* for national language, *r* for regional language, *v* for vernacular etc. Select the option *Build and display an index*. From this index, LPro will create a reversal (or finder list) for each language. These lists will appear in separate tabs on the left of your LPro screen, so they can be consulted at any time. They allow you to search a word in language A by imputing its "equivalent" in language B or C, or to compare the databases in terms of the number of entries they contain. You may also select the option *Display the language name in front of gloss*. We recommend doing so if your multilingual dictionary includes national and/or regional languages that a reader may be unfamiliar with.

d. The following pop-up window *Field markers*, is especially relevant if you have an existing database. It allows you to change a marker, for example if your database contains markers that do not conform to the pre-set MDF markers. Note that you cannot add a marker.

e. In the window *Default fonts*, choose how each language will be displayed. Use the Unicode conversion if you have an existing database that does not use Unicode fonts. The TECKit mapping converts your fonts to Unicode supported fonts. (For more information on Unicode conversion, please refer to the Toolbox guide to dictionary making.)

f. Next, *Filename* asks you to name and save your database. We recommend selecting Unicode UTF-8 encoding for your database.

g. Create a shortcut in the following window. Failure to do so results in having to go through the whole set-up process again.

h. Once you press the *Create* button, the following window appears.

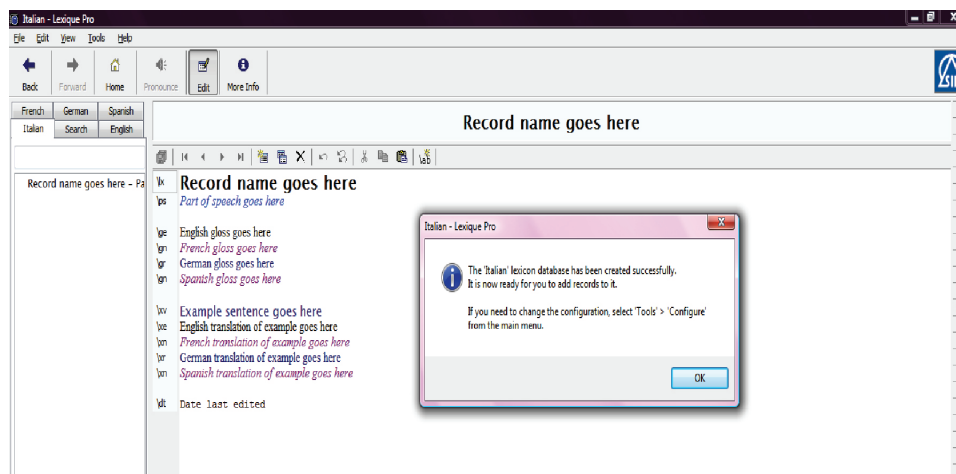


FIGURE 1: Lexique Pro dictionary window

Your dictionary is (almost) ready to use. To enter the first word in the dictionary, delete *Record name goes here* and enter the head word. Repeat for all fields. Delete *Part of speech goes here* and enter the part of speech of the head word: *n* for noun, *adj* for adjective, etc.³ If you accidentally delete a marker, say \ps, while deleting *Part of speech goes here*, type \ then select *ps* from the pop up window. Alternatively, click on the last small icon *Insert field* above the work area, and choose *ps*, part of speech (See also step **j** below).

i. To add a new record, click on the small icon *Insert new record*. A new record template appears with the default field markers: \lx, \ps, \ge, \xv, \xe, \dt. You do not need to enter the date; this is done automatically by LPro.

j. To add new field markers, click on the last small icon *Insert field*. Select the field marker you need from the list in the pop-up window (select *Show all markers*). The new marker will be placed where you last left the cursor while editing.

k. If your dictionary is multilingual, you can enter definitions, gloss, reversal, usage, examples and so on, in all languages relevant to your project. For example, the three field markers \de, \dn, and \dv allow you to define a lexeme in, respectively, English, the national language and the vernacular language.

l. Consider adding markers such as \sd semantic domains, \sc scientific names, or \cf cross reference, as they add an extra dimension to your dictionary: LPro creates hyperlinks between the \cf cross reference fields in your database. It also links the \sc scientific name marker to a relevant website (when exporting in html, see below). The \sd marker is used to organize the dictionary in semantic domains (see section 1.2, step **c** below). Other interesting fields to consider adding are \pc picture, \sf sound, or \ff to add links to different file formats (but see *Exporting* section 4 below).

m. LPro however is not customizable. If you have added a set of new markers to a record, and if you then click on *Insert a new record*, only the default field markers will appear in this new window. You will need to re-enter manually any field marker that is not in LPro's template. A possible way out is to copy an existing record which contains all the fields you need (click on the small icon *Copy record*), then delete all information from the copied record and replace it with the correct information.

n. If at any time you want to make additional changes to a record, select that record, then click on the big icon *Edit*. To delete an entire record, click on the small icon that looks like an X.

1.2 ADVANCED SET-UP. Once the basic set-up is finished, go to *Tools > Configure*. There are five main tabs on the left of the *Configure* window. We describe in the sections below only the features that you may need to change, but that do not already appear during the basic set-up process.

a. Languages. In the *Sort order* and *Upper and Lower case* tabs you can change the alphabetical order of your language, add a letter to your alphabet or delete one if it is not used in the orthography. LPro enables a user to include characters that are not directly available on a keyboard (e.g., characters with diacritics, phonetic symbols, and so on). There are two

³ For the list of abbreviations, refer to the *Toolbox guide to dictionary making*, Appendix E, page 195.

options to add these “special” graphemes: (1) directly type in the symbol if your keyboard manager allows you to type Unicode; (2) copy and paste these characters from a Word document. (These changes will also need to be made in the *Display* tab, step **d** below). The *Upper and lower case* tab tells LPro to recognize that two graphemes represent the same letter. For example, <A> and <a> are the same grapheme, in upper and lower case respectively. In *Case associations*, make sure that pairs like <A a> appear on the same line. The *Sort order* tab on the other hand is used to organize your dictionary’s entries. If you have, for example, a contrast between the graphemes <a> and <ah> to represent vowel length, but do not wish to have <a> and <ah> listed in separate headings in the dictionary, insert them on the same line: <A a Ah ah>. If you do want them under separate headings, insert them on different lines. Finally, note that if you tick the box *Sort order* at the bottom of the page LPro will create an index tab where your dictionary will display words alphabetically sorted by final letters.

b. Data source. If you go to *Toolbox settings*, you will see that the default selection is: *Do not use any toolbox database type or language encoding*. This seems counter-intuitive if you are using LPro with an existing Toolbox project. We tried deselecting this option and choosing an existing toolbox database type file. No changes were seen in the dictionary. The tab *Paradigm markers* offers a list of pre-set markers to be used in your dictionary if a headword appears under different forms in the language. For example in English, you would choose as the \lx lexeme ‘mouse’ then add a field \pl plural ‘mice’.

c. Formatting. The tabs *Field styles*, *Interface styles*, *User styles*, and *Field display* are more powerful than the *Default font* tab described above in section 1.1 step **e**. They allow you to change the fonts and styles (bold, italics, color, etc) of some field markers. If you have chosen to add a \sd semantic domain field marker (section 1.1, step **k** above), and if you have entered information in this field, go to *Categories*, and click *Yes display a Categories tab* (If this tab is not highlighted after you have entered information in the \sd field, close and reopen LPro). This step adds an interesting search function by semantic domains. Then go to *Category names*. If your own semantic domains do not conform to LPro’s, click on *Add all*. Your semantic domains appear and can be edited: highlight and click *Change*.

d. Display. You can change (to a certain extent) your dictionary’s interface. In the tabs *Home page alphabet links* and *Alphabet buttons*, change the alphabet accordingly if you did so in step **a** above. You can delete or change the image(s) on the welcome page in the tab *Home page images*. If you want to have the same display as the original SIL home page, you will need to have a picture with the same rectangular shape as the SIL original picture. But you can also insert a picture of different shape for a different layout. In the tab *Input buttons*, click *Display special character input buttons* if you have special characters. Then, click *fonts* and choose the font you want for these characters (we recommend using the same font style as the rest of the alphabet). Insert the characters in the *Special characters* space, as described in step **a** above. These input buttons are a useful added feature of LPro. They are used to search words in your dictionary, and used as typing keys when entering records. Click *About language* to add information on the language (in the form of an htm file), if you expect to distribute your dictionary project or publish it on the web.

e. Pre-process. The function *Consistent changes* lets you apply changes to your entire database, if you have a consistent change table (cc). CC tables have a similar function to the ‘search and replace’ function in Word. To learn more about CC files, please refer to

the Toolbox dictionary making guide. Last, the tab *Omit rules* allows you to choose which record will be exported when printing or publishing your dictionary. The way *Omit rules* is set up does not allow you to prevent some field markers in a record from being exported. It excludes an entire record from the export.

2. SETTING UP AN EXISTING TOOLBOX DICTIONARY. This process is similar in part to the set-up detailed in section 1. The configuration windows *Lexicon language*, *Gloss languages*, *Language details*, *Field markers*, *Default fonts*, *Categories*, *Upper and lower case*, *Sort order*, *Consistent changes*, *Omit rules*, and *Shortcuts* are identical to the one described above. So we only highlight here the functions that were not discussed previously.

a. If you are a Toolbox user and already have a dictionary project, click on the LPro icon, then *Open lexicon*. This lets you find your Toolbox database. The function *Open lexicon* looks for a file with an extension of the type “.txt”, “.dic”, or “.db”. However databases can also have a “.lex” extension. To choose your database, select *All files* in the pull-down menu.

b. In *Encodings*, select the same encoding as your Toolbox file.

c. The *Home page* window is slightly different than in step **d**, section 1.2 above. The alphabet list for example is taken directly from your Toolbox setting. At the bottom of that page, you can either choose (as in Toolbox) *Lexical citation* to export your dictionary sorted by its \lc citation form, or *Lexical entry name*, for the dictionary to be sorted by \lx lexemes.

d. Once your Toolbox project is uploaded, go to *Tools*, *Configure*, *Display*, *Shortcuts*. LPro does not automatically create a shortcut for your project. Failing to create a shortcut results in starting the set-up process again.

The installation is very straightforward. In case you missed a few steps, you can always go back to the configuration panel (*Tools > Configure*), and make additional changes, as discussed in section 1.2 above. Once your dictionary is set up and running, LPro allows you to export it and share it with other computer users. We now turn to those functions.

3. SHARING A DATABASE WITH OTHER COMPUTER USERS. Go to *Tools > Distribute lexicon*. This function creates an executable file, which can install a carbon copy of your dictionary on different computers.

a. You may distribute several lexicons, with or without attachments (such as sound files, videos, or pictures associated with some entries).

b. You can set several levels of accessibility to your file. You may encrypt your database so that viewers cannot edit it. You can restrict the export function and limit it to a paper print or a web publication.

c. Once you press the *Create* button, LPro creates an “.exe” file, that you can share with other computer-users. (Be sure you have the rights and permission to share your data, especially from the language community you work with.) This valuable feature allows you to share your dictionary with any interested parties, such as the language community with whom you are working. The “.exe” file created by LPro can install your dictionary on as many computers as you wish. If encrypted (thus noneditable) it can be valuable in schools, and in language and cultural centers with scarce internet resources and/or little to no funding for paper publications. The nonencrypted version will be of immense value to

native speakers, a community's language council, or a dictionary commission, who would be able to develop and update the dictionary on a regular basis, and share new versions with partners such as educators and language centers, thereby saving huge costs in printing and publishing.

4. EXPORTING A DICTIONARY. Another interesting function of LPro is exporting a dictionary in text, html, or xml formats. Go to *File*, and choose the export function you need. Then follow the configuration wizard.

4.1 EXPORTING AS XML. The export process contains two steps: (i) choose a location to save the file and (ii) export the document in xml to that location.

4.2 EXPORTING AS HTML. This export function creates an ".htm" file that allows you to publish your dictionary on the web. In the *Web page type*, choose the framed version if you want to export all the features of your dictionary (that is if you want the finderlists in other languages to be displayed, the *Category* tab, etc. Note that the latter appears in the htm version, even if you have not selected it (section 1.2, step c)). Choose *Frameless* if you want only the lexicon to appear, and no other language. *Export fields* lets you choose which fields to export, and which language(s) to display. Note however that the fields selected here are LPro's default field markers. You cannot export more than what you see here. *Output* creates a folder with the relevant ".htm" files. Once you press *Export*, the web version of your dictionary opens up.

4.2.1 PROBLEMS EXPORTING AS HTML. Although the user guide claims that pictures and sound files can be exported in the html format, so far we have been unable to do so. Pictures can be viewed on the computer version, but not in the html version. Although it is possible to edit htm files as text files, to include images and sound (as can be seen in Nick Thieberger's online dictionary <http://paradisec.org.au/SELexicon/index-english/main.htm>), this process requires modifications to the text file that we cannot provide here. Last, as opposed to the computer version, the htm version does not let you search for words, since it does not have any search function.

4.3 EXPORTING AS TEXT. This export function creates an ".rtf" file that allows you to print hard copies of your dictionary. In the *Export type*, choose the kind of dictionary to export: the lexicon in alphabetical order, the index or reversal if you have a multilingual dictionary, or a dictionary based on semantic domains. *Export fields* is as described in the section 4.2 above. The window *Pictures* asks you to specify which pictures to export if any, as well as their size. *Page settings* and *Paragraph settings* allow you to adjust the printing format. Note that the measures are in centimeters. Click *Export* after naming your document. The ".rtf" file opens up automatically.

4.3.1 PROBLEMS EXPORTING AS TEXT. We compared the ".rtf" document Lpro exports with the Toolbox ".rtf" file. The main advantage of using Lpro over Toolbox is that special characters appear in the Lpro document without any fine-tuning, whereas there are still problems with this issue in Toolbox, even when special characters are Unicode. The lay-

outs are different. Field markers in LPro can be printed in different colors, while Toolbox allows only bold or italics to discriminate information. The “.rtf” file that LPro generates is less dense than the Toolbox file. Entries are sparsely distributed on a page, which makes the dictionary more readable. Although this entails more pages to be printed (hence a higher cost), it is advantageous for beginning dictionary users (Corris et al. 2004:46). Changing a page setting is also easier in LPro than in Toolbox. Toolbox, on the other hand, offers the possibility to print the alphabet at the bottom of each page, a feature that is known to enhance word search (Corris et al. 2004:45). Other problems encountered with LPro include images: they are not exported properly. They appear on top of an entry, and thus look like they belong to the preceding entry. This is a serious drawback, since it removes any interest in including pictures in the dictionary. One author asked the LPro technical assistance for any help to fix this problem, but it seems that it is not fixable at present. We hope that this problem, as well as the others we mentioned, will be fixed in later versions of LPro.

5. SUMMARY. LPro is user-friendly software. Its simple interface allows the user to build a dictionary from scratch rather effortlessly, compared with the cumbersome Toolbox set-up. LPro can be used to edit an existing Toolbox dictionary: once your Toolbox lexicon is uploaded in LPro, any changes made to that lexicon will be recognized by Toolbox. Reciprocally, any changes made in Toolbox will appear in your LPro dictionary. The most important features of LPro are its *Export* and *Distribute lexicon* functions. They are similarly easy to handle. They create databases in formats such as htm that Toolbox does not offer. Being able to publish a dictionary on the internet or share it on several computers are welcomed features. And like most other SIL shareware, LPro is free, and technical support is available in a timely fashion.

LPro is only compatible with PCs, but not yet available for Vista. There are no LPro versions for Mac or Linux, and it seems that there will never be for these platforms (but once a PC has set up your lexicon, it can be shared with and viewed by Mac and Linux). Also, some proficiency with Toolbox is recommended when using LPro, especially in the setup process. One major drawback is that the web version of the dictionary is much less attractive than the computer version: fewer functions are available in the former. Finally, pictures and sound files do not show up properly in exported formats, and LPro is not customizable: when exporting, you cannot choose which field markers to exclude and you cannot add markers to a template.

Pros:	Allows the distribution of electronic versions of a dictionary with computer users, or to share a dictionary on the web
Cons:	Not customizable, some problems exporting
Primary functions:	An interactive lexicon viewer and editor
Platform:	PC
Open source:	No
Proprietary:	Freeware

Available from: <http://www.lexiquepro.com/index.htm>
Cost: Free
Reviewed version: 2.7
Application size: 2.6 MB
Documentation: <http://www.lexiquepro.com/download.htm>
<http://www.lexiquepro.com/features.htm>

REFERENCES

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