

# DynaLearn Installation Guide

*Updated for DynaLearn ILE 1.0.5 (2013/09)*



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## Where to start

The installation procedure mainly depends on your Operating System:

- If you are using **Windows** or **Mac OS X**, you can use the installer software which guides you through the installation process. *Continue reading on page 3.*
- In any other case, follow the manual installation steps. *Continue reading on page 4.*
- There is additional information, if you are using **Mac OS**. *Continue reading on page 7.*
- If you are using **Linux**. *Continue reading on page 8.*

## Using the DynaLearn Installer

The installer is the default installation procedure for Windows, Mac OS-X and Linux. Any problems should be reported to the developers (see the DynaLearn website).

- Download the installer file `installDynaLearn.jar` from the DynaLearn website. (Save the file on your computer or execute it directly from your web browser.)
- The file is an executable jar file:
  - If Java Runtime Environment is already installed, you simply have to double click the downloaded file to execute it. Otherwise, download and install the latest Java Runtime release from <http://www.java.com/download/>.
  - For debugging or manual startup, open a console window, go to the folder where the jar file is and execute: `java -jar installDynaLearn.jar`
  - For further details on how to run a jar file, simply search for it: <http://www.google.de/search?hl=&q=How+to+Run+a+.Jar+Java+File>
- If there are technical problems, contact DynaLearn via the website <http://www.dynalearn.eu>.
- If the installation via the installer fails, you can also follow the manual installation steps below.

## Manual Installation and Setup

### *System Runtime Components*

1. Download and install **SWI-Prolog** version **6.4.1** or later from:  
<http://www.swi-prolog.org/download/stable>
2. Download and install **the Java Runtime Environment (JRE) 7 update 15** or later from:  
<http://www.java.com/en/download/manual.jsp>
3. Download and install **Adobe Air version 3.6** or later from:  
<http://get.adobe.com/air/otherversions/>

### *DynaLearn Software Modules*

1. Download the DynaLearn software from: [www.dynalearn.eu](http://www.dynalearn.eu) -> software<sup>1</sup>.  
Unzip it into a convenient folder (we will refer to this as your DynaLearn folder).
2. Download the **jSmile** binaries, as appropriate for your operating system:
  - a. For **64bit Windows** systems: <http://www.wouterbeek.com/DynaLearn/jSmile64.zip>
  - b. For **64bit MacOSX** systems: <http://genie.sis.pitt.edu/forum/viewtopic.php?f=2&t=197>
  - c. For all other systems: <http://genie.sis.pitt.edu/download/software.html>

### *For Virtual Characters Functionality*

1. Download and install the Hamster Lab Client from:  
<http://www.hcm-lab.de/projects/DynaLearn/>
2. Download and install Mary Text-to-Speech version **4.3.0**.  
*Note: It is possible to have different versions of Mary TTS installed parallel. To avoid confusion and to save hard disk space you may want to uninstall previous versions, though.*
  - a. Download Mary version 4.3.0 from: <http://mary.dfki.de/Download>
  - b. Choose the installation target path carefully. By default a path inside the current user's profile is suggested which will cause the installation to be available only for the currently logged in user. We recommend to choose a path which is not restricted by the OS user management and which is available to all users like c:\mary4.
  - c. It's sufficient to install only the module "marybase" which is the preset configuration of the installer.
  - d. At the end of the installation the "MARY TTS Installer" window appears.  
Install the required voice packages as follows:
    - Click the button "Update" to refresh the list of available voices.

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<sup>1</sup> If not available check: [www.dynalearn.eu](http://www.dynalearn.eu) -> internal -> software

- Checkmark the entry "en-GB" in the "Languages" list.
- Checkmark the following voices in the "Voices" list:  
[dfki-obadiah-hsmm](#), [dfki-prudence-hsmm](#), [dfki-spike-hsmm](#)
- Click the button "Install selected" and go through the setup by following the on screen instructions.

Close the voice installer using the button "Quit" and finish the main installation finally.

## ***Configuring the DynaLearn Setup***

1. In your DynaLearn folder, open the file `dynalearn.conf.temp`
2. In the 'java' element, fill in the installation location of the Java Runtime Environment.
  - a. Windows example `C:/Program Files/Java/jre7/bin/java.exe`
  - b. MacOSX example `/usr/bin/java`
  - c. If you do not use the Virtual Characters, you can proceed to step 6.
3. In the 'hamsterLab' element, fill in the installation location of the Hamster Lab Client executable.

*Note that you have to use forward slashes '/' in the paths you specify.*

  - a. Windows example `C:/Program Files/HamsterLabClient/HamsterLabClient.exe`
  - b. MacOSX example `/Applications/HamsterLabClient.app`
4. In the 'mary' element, fill in the installation location of the Mary Text-to-Speech Server.
  - a. Windows example `C:/Mary4/bin/maryserver.bat`
  - b. MacOSX example `/Applications/Mary TTS/bin/maryserver`
5. In the 'teachableAgent' element, indicate the preferred number of questions for the teachable agent challenge. Choose a specific number or one of the flexible metrics: `dynamic_low`, `dynamic_medium` or `dynamic_high`.
6. If you want to customize the assignment of Virtual Characters to use cases, then change the VC names inside the `use_case` tags. See the section 'Setting the Virtual Characters' in the usage guide for more information.
7. Save the file as `dynalearn.conf` and close the file.
8. If you want to use the Virtual Character's quiz mode you need to perform this step:

The **jSmile** archive you downloaded earlier, you will find two files.

- a. Put `smile.jar` in the following subdirectory of your DynaLearn folder:  
`use_cases\InteractionManager\lib`
- b. Put the other file (name depends on operating system) in:  
`use_cases\InteractionManager`

## DynaLearn on MacOSX using X11

Installing DynaLearn on a MacOSX can be a difficult process, due to the multiple different incompatible versions of X11<sup>2</sup> that are released by Apple. This description below assumes that the SWI-Prolog and the installed version of X11 are compatible. XQuartz is an open source implementation of X11 (see below). This software is needed because SWI-Prolog uses the X11 graphics system instead of the native MacOSX graphical system (to be more platform-independent).

### *Putting the software in place*

1. Install SWI Prolog via MacPorts. Download the package and open it. Follow the instructions on the screen.
2. Install the newest version of XQuartz (<http://xquartz.macosforge.org/trac/wiki>). Download the disc image, open it and run the contained installer. Start XQuartz, and make the application active. Choose X11 → Preferences, and tick the box 'Follow system keyboard layout' to allow the use of different alphabets.
3. Download the DynaLearn software from the website and unzip it to a convenient location on your computer (e.g. on the Desktop) or use the installer application.
4. You may need to register swipl to the Terminal manually. See Troubleshooting for Mac OS for information on that.

### *Running*

1. The installer creates batch files inside the installation target folder. If you installed DynaLearn into the `Applications` folder, these files are accessible through the common Applications flyout.
2. To start the software manually follow these steps:
  - a. Open a new terminal Window (spotlight search for "terminal").
  - b. Navigate to DynaLearn's root folder (use command "pwd" to see your current folder, use "ls" to see the content of the current folder, use "cd" to change your current folder, use "cd .." to move one folder up in the folder hierarchy).  
E.g. `cd Desktop/DynaLearn3`.
  - c. Use `swipl -f startup.pl` to start DynaLearn

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<sup>2</sup> See: [http://en.wikipedia.org/wiki/X\\_Window\\_System](http://en.wikipedia.org/wiki/X_Window_System)

<sup>3</sup> Type the details between " and " on the command line, followed by hitting "Return".

## ***Troubleshooting for Mac OS***

If `swipl` cannot be found when trying to start the software, you may have to register it to the console explicitly. As this should apply for all users, you may edit `/etc/profile` to do the registration.

1. Note: You need administrator rights for your user account to do this setup.
2. Open a Terminal window. (Use Spotlight search for “Terminal”)
3. Optional, but recommended: To backup your existing profile file type and execute:

```
cp /etc/profile ~/Desktop/profile.backup
```

This will create a file named `profile.backup` on your desktop. You can move it to another place or delete it if no longer needed.

4. Type and execute the following line:

```
sudo /Applications/TextEdit.app/Contents/MacOS/TextEdit /etc/profile
```

This opens the file `etc/profile` in TextEdit with super user access rights.

You will be asked for your password before TextEdit is opened.

5. In TextEdit add the following lines to the opened `profile` file:

```
if [ -z "$DISPLAY" ]; then export DISPLAY=:0; fi
PATH=$PATH:/opt/local/bin
```

6. Save the file. You should now be able to start DynaLearn.  
To test if the registration succeeded, open a new Terminal window and execute:

```
swipl -version
```

This line should print the version number of the installed prolog environment.

## DynaLearn on Linux

Note: The Virtual Characters do not and will not work on Linux.

The installation consists of the following steps:

1. Download and install **SWI-Prolog** version **6.3.11 or later** from:  
<http://www.swi-prolog.org/download/stable>
2. Download the DynaLearn software from: [www.dynalearn.eu](http://www.dynalearn.eu) -> software<sup>4</sup>.  
Unzip it into a convenient folder (we will refer to this as your DynaLearn folder).
3. DynaLearn has to be started using the terminal. Depending on the installation directories that are used, the command is `swipl -f startup.pl`.
4. In your DynaLearn folder, open the file `dynalearn.conf.temp`
5. In the 'teachableAgent' element, indicate the preferred number of questions for the teachable agent challenge. Choose a specific number or one of the flexible metrics: `dynamic_low`, `dynamic_medium` or `dynamic_high`.
6. In the 'namespace' element, indicate the namespace for the interaction with the repository.
7. In the 'webservice\_url' element, indicate the URL of the webservice that provides grounding and ontology-based feedback.
8. In the 'authentication' element, indicate whether the interaction with the repository needs an authorization header.
9. Save the file as `dynalearn.conf` and close the file.

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<sup>4</sup> If not available check: [www.dynalearn.eu](http://www.dynalearn.eu) -> internal -> software