OWLL

OOHOO Web-based Language Lab

User Guide

26/09/2012

Type:	Premier Moodle Plug-in
Version:	3.0
Moodle Version:	2.X
Short Descriptor:	Language Lab

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Contents

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Introduction

OWLL (OOHOO Web-based Language Lab) is a Moodle plugin replicating all functions of a traditional language lab, with added features that stem from its being web-based. It allows for synchronous as well as asynchronous use, in a face-to-face as well as in a distance learning setting.

It is developed and maintained by Oohoo IT Services Inc.

Technical Requirements

- Red5 Flash Server
- FFMPEG
- Apache2 Web Server

Server Installation

This module is dependent on two server technologies apart from Moodle. These instructions are based on Ubuntu 10.04 LTS as this is the server oohoo.biz uses. Generally speaking, these instructions should work on most Linux distributions.

Red5 Installation

These are based on instructions by Nicky Hajal from the following site: http://tumbledesign.com/how-to-install-red5-0-9-on-ubuntu-10-04-lts/ However, there are differences and I strongly suggest you follow these steps.

Make sure that you have the latest updates for your Ubuntu server. Oohoo uses Ubuntu Server 10.04 LTS 64 Bit.

```
sudo apt-get update
sudo apt-get upgrade
```

Once this is done, you have to make sure that the following repositories are available. If not, add them to /etc/apt/sources.list.

```
deb http://us.archive.ubuntu.com/ubuntu/ lucid multiverse
deb-src http://us.archive.ubuntu.com/ubuntu/ lucid multiverse
deb http://us.archive.ubuntu.com/ubuntu/ lucid-updates multiverse
deb-src http://us.archive.ubuntu.com/ubuntu/ lucid-updates multiverse
```

```
deb http://us.archive.ubuntu.com/ubuntu/ lucid-backports main restricted
universe multiverse
deb-src http://us.archive.ubuntu.com/ubuntu/ lucid-backports main restricted
universe multiverse
deb http://archive.canonical.com/ubuntu lucid partner
deb-src http://archive.canonical.com/ubuntu lucid partner
```

At the command prompt type the following:

```
sudo apt-get update
```

Install the following packages:

```
sudo apt-get install java-package
sudo apt-get install sun-java6-jdk
sudo apt-get install sun-java6-jre
```

NOTE: Nicky Hajal also installs Ant and Subversion. However, these two packages are never used during the Red5 install process. Therefore, I am omitting these two steps.

You may not be able to install the Sun Java package. If this is the case, you can install the openJDK java package. It also works. Follow this step:

```
sudo apt-get install openjdk-6-jre
```

Download Red5 version 0.8. **Nicky Hajal installs version 0.9. This is not a recommended version for the Language Lab.**

```
wget http://trac.red5.org/downloads/0_8/red5-0.8.0.tar.gz
```

Red5 RC2 has been released. If you would like to experiment with the most recent release of Red5, see the link below. Note that this version has not yet been extensively tested (but it does work, so far).

```
wget http://trac.red5.org/downloads/1_0/red5-1.0.0-RC2.tar.gz
```

Then type the following code:

```
sudo mkdir /usr/share/red5
sudo cp red5-0.8.0.tar.gz /usr/share/red5
cd /usr/share/red5
sudo tar xvfz red5-0.8.0.tar.gz
```

You can start Red5 by typing the following command:

```
sudo sh red5.sh
```

In your browser, go to http://your-red5-server-address:5080/. You should see the Red5 default page.

This is not ideal because as soon as you press CTRL-c to return to the command prompt, Red5 turns off. You also do not want to log in to your server every time you reboot just to turn on Red5. In order to have Red5 start as a "service" whenever you boot, do the following.

Create a file based on this boot script: http://oohoo.biz/red5 in your home directory. Then follow these steps:

```
sudo mv red5 /etc/init.d/
sudo chmod a+x /etc/init.d/red5
```

Start the server by typing the following:

```
sudo /etc/init.d/red5 restart
```

You can now use CTRL-c to return to the command prompt without turning off Red5. However, this script will not boot when you reboot your server. You must perform this final step:

```
sudo update-rc.d red5 defaults
```

Now reboot your server to make sure Red5 starts.

```
sudo reboot
```

Installing OflaDemo

Once Red5 is installed, you still need to install OflaDemo in order for the Language Lab to work.
Go to your Red5 server with a browser: http://your-red5-server-address:5080/.
Click on "Click here to install demos." In the table of demos, click on OflaDemo and then the
Install button.

If it fails to install try changing the permissions on the following folder:

```
sudo chmod 775 -R /usr/share/red5/webapps
```

Try installing again.

You should now have a fully configured and functional Red5 Server.

Red5 Adapter Plugin (RAP)

The Red5 Adapter Plugin is used to manage streamed files on the Red5 server. Whenever a
teacher or a student records themselves, an .flv file is created on the Red5 Server in the
oflaDemo/streams folder. Without the RAP, such as earlier versions of Language Lab, the
stream folder would fill up with often unnecessary files or previous files from past courses. This
resolves the issue by letting Moodle interact directly with the Red5 server. This plugin also
enables the possibility of downloading the recorded files as MP3s.

RAP Installation

Installing RAP is quite simple. Keep in mind that RAP is installed on the Red5 Server, NOT THE
MOODLE server. You will need a web server such as Apache or IIS, if installing on Windows, on
your Red5 server. The examples used within this document, are with an Ubuntu 10.04 LTS
server. This, however, should work on any server that supports PHP 5.X.X.

I will assume that you have already installed the web server. Oohoo uses Apache2 with PHP5.
Although not required, installing an SSL certificate for your web server makes it more secure.
This can be a self-signed certificate. You can follow these instructions if you need help creating
a self-signed certificate: http://www.akadia.com/services/ssh_test_certificate.html.

1. Inside the mod/languagelab folder in Moodle, you will find another folder called RAP. Copy the contents of the RAP folder into the default web folder on the Red5 Server. Usually something like /var/www. This will be known as the root folder from now on.
2. Copy the config.xml file to a folder outside of the web folder. This is for security reasons. You wouldn't want someone accessing your config file.
3. In the root folder, edit the config.php file. Change the $CFG->xml_path = value to the path value of your config.xml file.
4. Rename the adapter.php file to whatever name you want. Remember to keep the .php extension. You do not have to rename the file, but it does make the system more secure.
5. Login to your Moodle server as an administrator. Enter into the Language Lab settings by going into the Settings block under Site Administration->Plugins->Activity Modules->Language lab (If you are hosting a Red5 server for someone else and you do not have access to their Moodle server, send the Moodle administrator this information.)
6. Under File name for the Red5 Adapter Plugin, enter the new name that you have given the adapter.php file WITHOUT the .php extension. For example, if you have changed the name to mynewadapter.php, you would enter mynewadapter.
7. Check the Secure access to Red5 Adapter Plugin if your server is using an SSL certificate. Again, not necessary, but it just makes the whole system more secure.

RAP: Edit config.xml

In the config.xml, you will find a default moodle tag. You must edit the following attribute values:

```
serverAddress='IP or Domain name of Red5 Server'
```

This is the IP address or Domain name of the Red5 server that you are installing the RAP on. You can get this address from your Moodle Language Lab settings under Path to your Red5 server.

```
languagelabPrefix='Prefix from Moodle language lab setup'
```

This is the prefix found in the Moodle Language Lab settings under Enter a prefix for recorded streams.

```
streamFolderPath='/path/to/red5/oflaDemo/streams/folder/'
```

This is the path to your oflaDemo stream folder. On Ubuntu systems, this is usually /usr/share/red5/webapps/oflaDemo/streams. Do not forget to add the end slash (/).

```
salt='a mix of letters/numbers/symbols'
```

This is used for security reasons. This password salt must also be entered in the Password salt value in the Moodle Language Lab settings.

Save the file.

If you are hosting more than one Moodle server with the Language Lab, you can add another Moodle tag with the appropriately defined attributes. For example you could have your config.xml file look similar to the following:

```
<config>
   <moodle serverAddress='my.firstserver.com' languagelabPrefix='mdl_firstserver'
streamFolderPath='/path/to/red5/oflaDemo/streams/folder/' salt='abcdefgh123456@#$'/>
   <moodle serverAddress='my.secondserver.com' languagelabPrefix='mdl_secondserver'
streamFolderPath='/path/to/red5/oflaDemo/streams/folder/' salt='ijKLMNOpq09876*&%$'/>
</config>
```

You can check your configuration by running a test. Just point your browser to http://your.moodle.site/mod/languagelab/raptest.php.

FFMPEG with MP3 Encoding installation

At the command prompt type the following:

```
sudo apt-get install ffmpeg libavcodec-extra-52
```

Ubuntu can sometimes be difficult. If you find that your FFMPEG installation does not work, try installing the following version:

```
sudo apt-get install ffmpeg libavcodec-extra-53
```

Plug-in Installation

1. Unzip the downloaded plug-in file to your Moodle root/mod/ folder. This will create the languagelab folder.
2. Login to your Moodle server as an administrator and, if the installation process did not start automatically, navigate to the Settings block -> Site Administration and click on Notifications
3. You will be prompted to update your Moodle server. Press the update button at the bottom of the page to install.

When the installation is complete, you will be redirected to the Language Lab settings page. Although not all fields are required, there are several that must be filled in with the proper information in order for the Language Lab to work.

- *Path to your Red5 Server (required):* This is the IP address or Domain Name of the Red5 flash server that you will be using for the recordings.
- *HTTP Path to audio/video files:* This is the path to the audio recordings on your Red5 server through HTTP. Ex: http://myred5server.com/myrecordings
- *Name of the folder on the Red5 Server where files are saved*: This can be left blank. However, if you are hosting for several OWLL instances, you can have the recorded files saved under separate folders. This makes it easier to manage your files on the Red5 server. Ex: If you have two Moodle servers, one for school A and one for school B, pointing to the same Red5 server, you could name the folder schoola on the School A Moodle server and schoolb on the School B Moodle server. That way all recordings for School A will be in the schoola folder. The same is true for School B.
- *Enter a prefix for the recorded streams*: This is not required. However, it makes it easier to find recordings within your Red5 Flash server if you are not using the above folder structure.
- *Maximum number of users*: Default is 25. This is the maximum number of concurrent users allowed to use OWLL. This is to prevent excessive traffic to the servers at any given time. Setting this number too high could cause performance issues.
- *Activate Stealth Mode*: Default no. If you would like stealth mode to be enabled by default, check on this box.
- *File name for the Red5 Adapter plugin*: If you are using the Red5 Adapter Plugin (RAP), you must enter the name of the adapter plugin file. If the Red5 server is hosted, you must get this information from your provider.
- *Secure access to Red5 Adapter Plugin*: If you are using the Red5 Adapter Plugin (RAP) and your Red5 server is using a security certificate, check this box.
- *Password salt value*: If you are using the Red5 Adapter Plugin (RAP), you must enter the Password salt from the config.xml file for your server.
- *Nb of microseconds before the next auto history refresh*: Default 30000 (30 seconds.)This value is used to refresh the students recording history list within the teacher control panel. It refreshes the list every 30 seconds. Teachers can also manually refresh the list. Therefore, there is no need to change this value.

- *Nb of microseconds between the next auto class monitor refresh*: Default 5000 (5 seconds.)This value is used to refresh the class monitor automatically. Whenever a student enters an OWLL activity, he shows up in the class monitor. If you find that the delay is too long for the students to appear in the class monitor, change this value to a lower number. If you find that there is too much traffic to your server, you can also increase this value. This value also affects how quickly the *thumb up* action button appears on the student console.
- *Nb of microseconds before the next auto refresh for students*: Default 5000 (5 seconds.) This is the number of seconds the student console refreshes itself. This affects both the *thumb up* and history.

Do not forget to save changes at the bottom of the page. If you ever need to return to these settings, you can do so by following this path: Settings->Site Administration->Plugins->Activity Modules->Language Lab.

Getting Started

Creating a Language Lab Activity

Navigation

Home
- My home
- Site pages
- My profile
- My courses
  - LL Demo
    - Participants
    - Reports
    - Presentation
    - Examples
      - **Activité diagnostic**
      - Texte: Le petit prince
      - Consonants
      - Ejercicio
      - Ueli Steck's Eiger ascent
    - Download and documentation
  - Demo LL
  - SC - demo
  - email
  - GC
  - Ressources

Settings

- Language lab
  - **Edit settings**
  - Locally assigned roles
  - Permissions
  - Check permissions
  - Filters
  - Logs
  - Backup
  - Restore
- Course administration
- Switch role to...
- My profile settings

Updating Language lab in Examples

General

Activity name* : Activité diagnostic

Description :

Font family | Font size | Paragraph

B *I* U ABC x₂ x²

Enregistrer la réponse à cette question :

Une nouvelle maman vient vous consulter. Elle vous semble nerveuse. Elle veut savoir ce qu'elle doit faire pour s'assurer que son bébé soit en bonne forme physique. Rassurez-la et donnez-lui un conseil (ex : manger de 5 à 10 portions de fruits / légumes par jour).

Path: table » tbody » tr » td » p » strong

Master track : 0:00 / 0:00

Master track currently used : mdl_oohoo_mastertrack_1329928403

One recording per student : ☐

Available from: 27 | June | 2012 | 13 | 00 | ☐ Enable

Due date: 27 | June | 2012 | 13 | 00 | ☐ Enable

Advanced settings

Video not available for now. Please check for new version soon...

Use grade book : ☐

Grade : No grade

Common module settings

Group mode : No groups

Visible : Show

Restrict access

Allow access from : 27 | June | 2012 | 00 | 00 | ☐ Enable

Allow access until : 27 | June | 2012 | 00 | 00 | ☐ Enable

Grade condition : (none) | must be at least | % and less than | %

Add 2 grade conditions to form

Before activity can be accessed : Hide activity entirely

Save and return to course **Save and display** **Cancel**

As with all Moodle editing, you must first turn on editing. From the "add an activity" drop down menu select Language Lab. If using Moodle 2.3.x, click on the radio button.
You may get a flash pop-up window. You must agree to use if you want to record yourself.

- **Activity name:** Add a name for this activity
- **Description:** This is where you explain what you want the students to do. Videos and audio files can be uploaded. If you did install the Audio Anywhere plugin, you can also record yourself.
- **Master track:** A master track is an audio sample with blank spaces allowing students to record themselves during the blank spaces.

Simply press the round record button and record your exercise. For example, you could record the following exercise:

```
 Please say the word "bonjour" (leave a 5 second pause) Now, say the words
"bon soir" (again, leave a 5 second pause).
 This recording will play back when the student presses the record button.
During the 5 second pauses, the student can say the words and they will be
recorded. The teacher listening to the student recordings will hear the
master track and the students' response, allowing for an easy comparison.
 Note: We had to integrate in this fashion because Flash does not allow
pausing while recording.
```
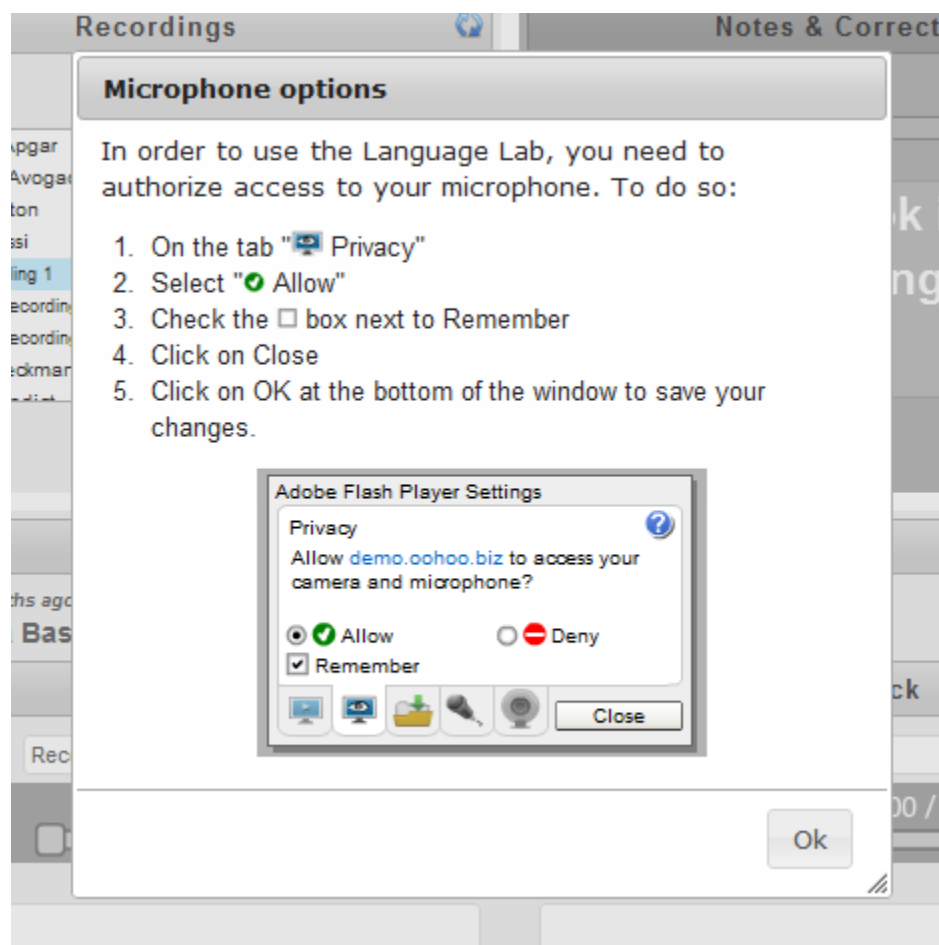
- **Master Track (mp3 only):** Similarly, if you have previous recordings in MP3 format, you can choose to upload the MP3 file and use it as the Master Track. If you do use the MP3 file, it is important that you check the following checkbox "Use the Uploaded MP3 as Master Track." Otherwise, the manually recorded track above will be used. If you have previously uploaded an MP3, but would like to use the manual recording, uncheck the checkbox from "Use the Uploaded MP3 as Master Track." **Note**: Once students have started submitting recordings, you will no longer be able to change the Master track.
- **Use the Uploaded MP3 as master track:** If you did upload an MP3 file, you must check this box in order to use it. Otherwise the recorded file will be used.
- **One recording per student:** Check this box if you want students to only submit one recoding. The default is the ability for them to submit multiple recordings per exercise.
- **Available From/ Due Date:** Choose the date that the students can record. Once they are past the due date, students will still have access to the activity, but they will not be able to record.
- **Allow video:** This feature was added in for those who teach sign language. It can be used for other reasons too. If checked, video and audio will be recorded. Note that you do need a web cam for this feature to work.
- **Use grade book:** By default, no grading will be given for language lab activities. That way you can create as many language activities for exercise purposes, without filling up your grade book. If you do want to grade this particular activity, check this box.

At this point you can save and return to the course or save and display. Without any student submissions, you will not be able to see anything.
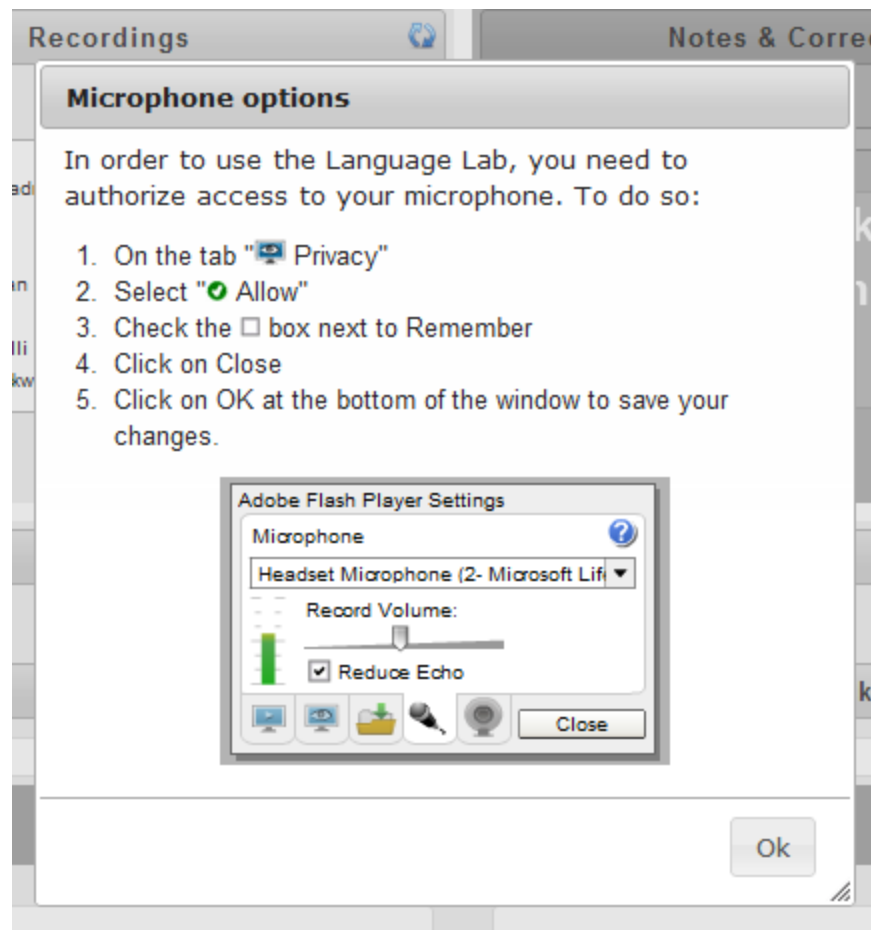
Using the Language Lab

Security and Microphone Settings

If this is the first time using the microphone or webcam on this site, you will be prompted with the following interactive pop-up. You must click on the radio button "Allow" in order for the Language Lab to work. This gives Flash permission to use your microphone. We suggest checking the "Remember" checkbox so that you do not have to perform this every time you enter a Language Lab activity. *These settings are true for both students and teachers.*

Next, you will want to select the proper microphone to use by clicking on the microphone tab. We strongly suggest using a USB headset with the Language Lab.

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Recordings   **Notes & Correc**

Microphone options

In order to use the Language Lab, you need to
authorize access to your microphone. To do so:

1. On the tab "📺 Privacy"
2. Select "✔ Allow"
3. Check the ☐ box next to Remember
4. Click on Close
5. Click on OK at the bottom of the window to save your
   changes.

Adobe Flash Player Settings

Microphone   ❓

Headset Microphone (2- Microsoft Lif ▼

Record Volume:

☑ Reduce Echo

🖥 📺 📂 🎤 📷   Close

Ok

Instructor View

Interface

Enregistrer la réponse à cette question :

Une nouvelle maman vient vous consulter. Elle vous semble nerveuse. Elle veut savoir ce qu'elle doit faire pour s'assurer que son bébé soit en bonne forme physique. Rassurez-la et donnez-lui un conseil (ex : manger de 5 à 10 portions de fruits / légumes par jour).

Class Monitor   Configuration

Recordings

Search:

- ⊿ Virginia Apgar
  - ▷ Recording 1
  - ▷ New Recording
  - Amedeo Avogadro
- ⊿ Clara Barton
  - ▷ Recording 1
  - ▷ New Recording
  - ▷ ▷ New Recording

Download MP3   Delete

Notes & Correction

Grade 0

Private Notes

Enable gradebook integration to access grading interface

Submit

Student Recording

1.7 weeks ago
Clara Barton

Recording

Title   New Recording

▶ ■   0:00 / 0:00   🔊

Description

Feedback

Title   Re: New Recording

▶ ■ ●   0:00 / 0:00   🔊

Description

Submit

You are logg

Once inside the OWLL module, you will be presented with the teacher interface. It is divided in five segments.

1. Segment 1: At the very top, you have the description/instructions for the particular exercise. This is to help remind you what the activity is about.
2. Segment 2: Middle-left, student list and their recordings.
3. Segment 3: Middle-right, grade book integration
4. Segment 4: Bottom left; student playback area
5. Segment 5: Bottom right, teacher feedback area

Most of the work as a teacher will be done in segments 2, 4 and 5.

Listening and Commenting on Student Recordings

1. Click on the triangle on the left of the student's name in segment 2 to reveal the recordings.
2. Click on the recording name. Eg. for Clara Barton, click on "New Recording"'. Notice that segment 4 displays the student's name, picture, time of recording and an audio controller. Also notice that segment 5 also displays an audio controller with the possibility to record.
3. In segment 4, press the play button (triangle) to listen to student recording. You can use the slide bar to shuffle through the recording in order to rewind or fast forward. Press the stop button (square) to stop the playback.
4. If you want to leave audio comments, click the record button (red circle) in segment 5 to record yourself. Press the stop button to stop recording. You can play back your recording by pressing the play back button. If you are not satisfied, just press the record button again to start over. Notice that you can also leave written comments in the description area. Once you have completed and are satisfied with your comments, press the submit button at the bottom right to save and send your comments to the student.

Download and Delete Recordings

You will also notice the download and delete buttons when a recording is selected. If you want to download the recording in MP3 format, simply click the download button. You will be prompted to save the file. You can then use the MP3 file to play the recording in your favorite audio player such as an iPod.

To delete a student recording, press the delete button.

If you need to remove your comment, simply select the comment under the student recording and press delete.
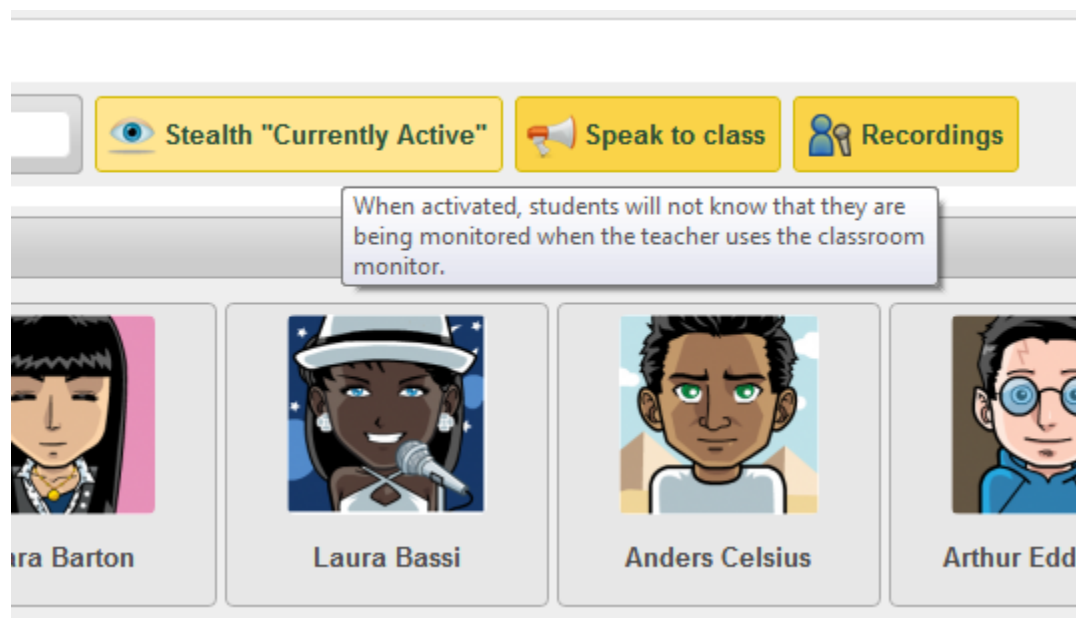
Refresh Recording History

By default, the student list in segment 2 is refreshed automatically every 30 seconds. You can refresh manually by clicking on the refresh button on the top right.

Class Monitor

You may want to supervise your students online while they are recording. You can do this by using the class monitor.

On the top of segment 2, notice the class monitor button. Simply click this button to activate the class monitor.
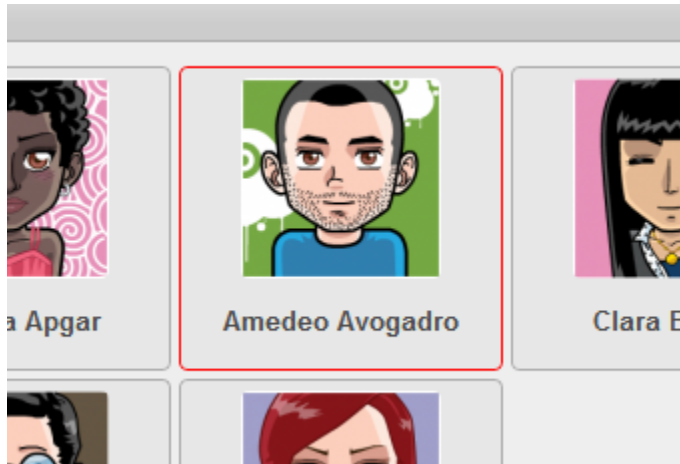

You will see the students who are online for the specific activity and those who are offline. In the online portion you can do the following;

1. *Listen to a student*: Mouseover a student picture to listen to the student.

2. *Talk to the student:* Click on the picture. Two buttons will appear (see picture below). Click the button with the two chat bubbles. This will start a live dialog session with the student.

3. *Give a thumbs up:* Pressing the Thumbs up button, will send an image of the thumbs up to the student console letting the student know that you are satisfied with his work. You do not have to be talking to the student in order to use this feature.

Raised hand

When a red flashing border appears around a student picture, it means that the student has raised his hand. You can click on the student picture to bring up the control icons. Clicking the double chat button will start a conversion with the student. To stop the flashing red border, click on the student picture.

Stealth mode

When you mouse over a student picture, the student can see that you are listening to them as an ear icon is displayed on the student console. To prevent students from noticing that you are listening to them, enable the stealth mode by clicking on the button "Stealth currently inactive" The button will change to "Stealth currently active". To disable, just press the stealth button again.
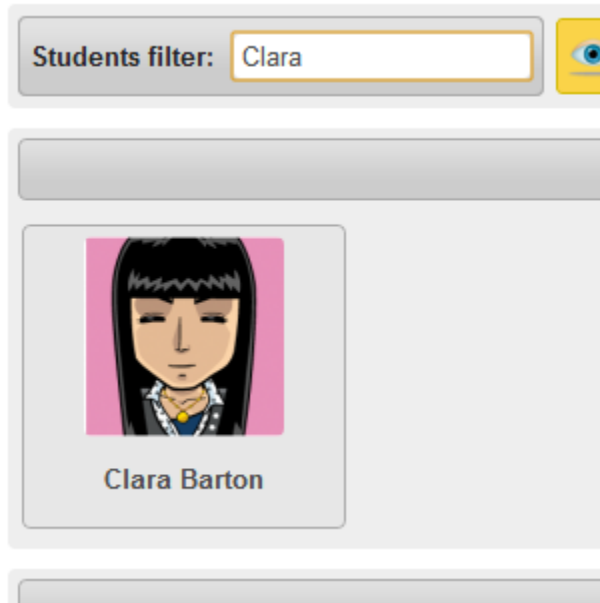
Speak to class

You may want to give instructions to the whole class. Instead of talking to each individual student one at a time, you can talk to the whole class at once by clicking the "Speak to class" button. This will disable

the student console for every student. You are now able to give your instructions to the class. Note: this is a one way stream. That is, the students can hear you, but you cannot hear the students. To stop, simply click on the close button.

Recordings button

By clicking the recordings button, a popup window of the teacher interface will appear. This allows you to listen to the student recordings while remaining in the class monitor.

Searching for students

You can search for students by entering their name in the "Students filter" field. The search will reveal if the student is online or offline.

Exercises can be graded and added to a grade book

If you enabled the grade book, segment 3 will allow you to grade the students. Simply enter the grade and comments. Click on submit to save to grade book. Note: The comments in this area are only viewable by teachers. Students do not see these comments.

Student View

Interface

Enregistrer la réponse à cette question :

Une nouvelle maman vient vous consulter. Elle vous semble
nerveuse. Elle veut savoir ce qu'elle doit faire pour s'assurer que
son bébé soit en bonne forme physique. Rassurez-la et donnez-lui
un conseil (ex : manger de 5 à 10 portions de fruits / légumes par
jour).

New Recording	Raise hand		Configuration

Recording

Title: New Recording

⏵ ⏹ ⏺   0:00 / 0:00   🔊

Description

[   ]

Submit

Recordings   Search: [   ]

▸ Recording 1
  💬 Re: Recording 1

Download MP3 | Delete

When a student enters an OWLL activity, he is immediately ready to start recording.

1. Click the record button (red circle) to record. Speak into the microphone. Click stop (square) to stop recording.
2. Change the title from New Recording to a more descriptive meaning
3. Add notes if you so desire in the description field
4. Click "Submit" to save your work.
5. To create a new recording, click on the "New Recording" button. Repeat steps 1 through 4

A history of the recordings is available in the recordings pane. To listen to previous recordings or the teachers comments, click on the recording name. Press play (triangle) in the audio controller.
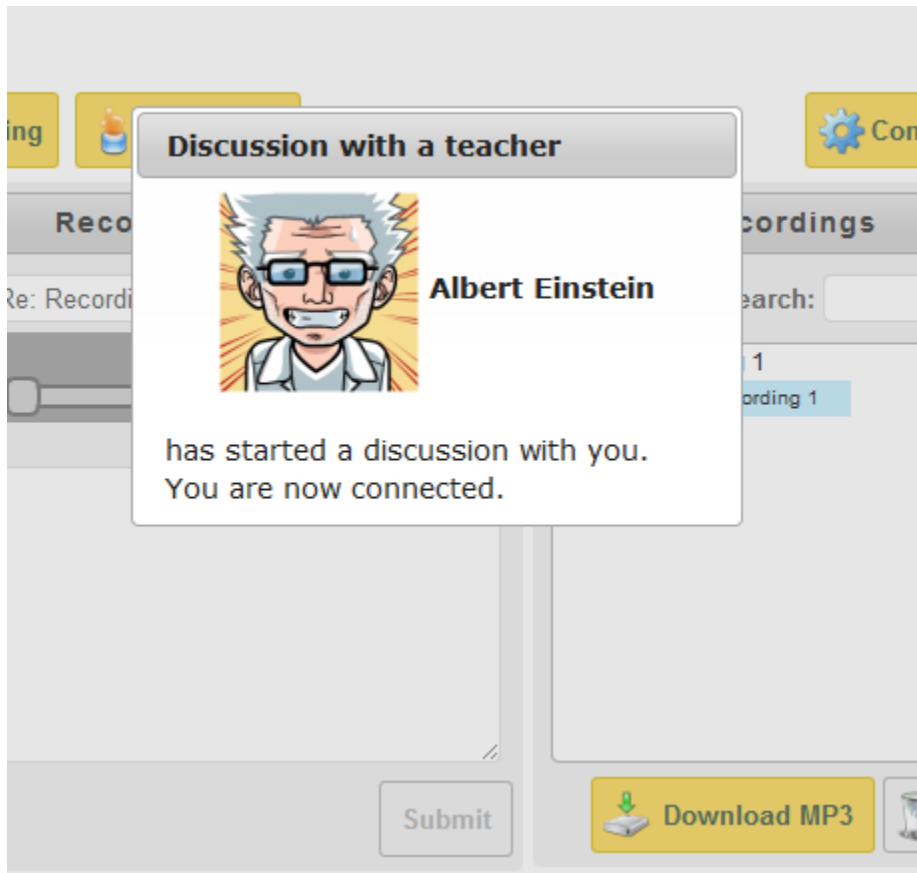
Download or delete

You can download a recording as an MP3 by clicking the download button after selecting a recording.

If you wish to delete a recording, click the delete button. You will be prompted to confirm.
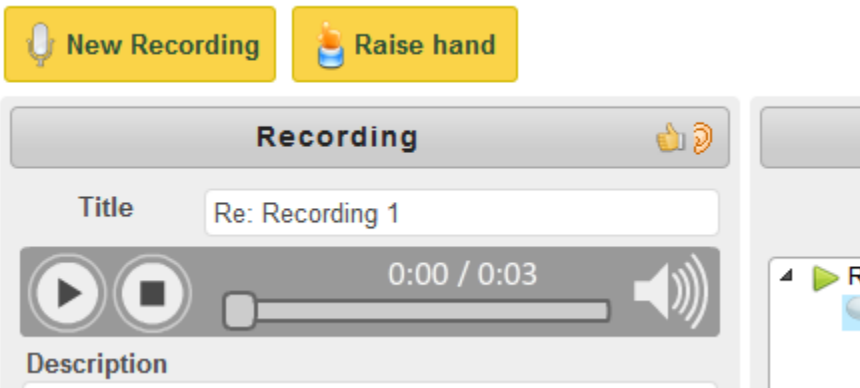
Raise Hand

If you need to ask your teacher a question, you can raise your hand by clicking on the "raise hand" button. Note: this feature only works if the teacher is in the Class Monitor.

Students can talk to the instructor

If your teacher is using the Class Monitor, he may want to talk to you. If so, you will not be able to record anymore. A picture of your teacher will be displayed in a popup and you will be able to have a conversation with the teacher.

Ear and thumb Icons

When a teacher is in the class monitor, he can listen to you live. You will notice an ear icon show up when the teacher is listening to you. That way, you know you are being listened too. However, the teacher can enable Stealth Mode. In this case, you will not have any indication that the teacher is listening to you.

The thumbs up icon will appear when the teacher finds that you are doing good work and to keep up the good work.

Additional Features

- Can be used for spoken and sign language (because of the video component)
- Audio/video examples can be uploaded or created within the tool
- Audio/video component can be added to any tools using an html editor (including, for example, forums)

Troubleshooting

Cannot record

Click on the configure button and make sure that the security and microphone settings are set. If these are properly configured, contact your administrator.

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