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Class Climate LTI® Integration

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1. Overview and Technical Requirements

The Class Climate LTI® integration functionality allows you to use the built-in LTI framework of your learning management system (LMS) to display Class Climate survey information within the learner and instructor views. The Class Climate LTI integration works with all systems supporting the IMS LTI® standard, such as Blackboard, Moodle, BrightSpace® by D2L or Canvas.

The LTI integration leverages LTI Roles to populate information in our two dashboards.

1.1. Learner Dashboard

Students now have a dashboard providing survey information in a rich and customizable content. Visual indicators have been incorporated to encourage students to take their surveys.

Figure 1: Learner Dashboard

1.2. Instructor Dashboard

Instructors will be provided their survey's response rates throughout the evaluation period to help them encourage their students to participate.

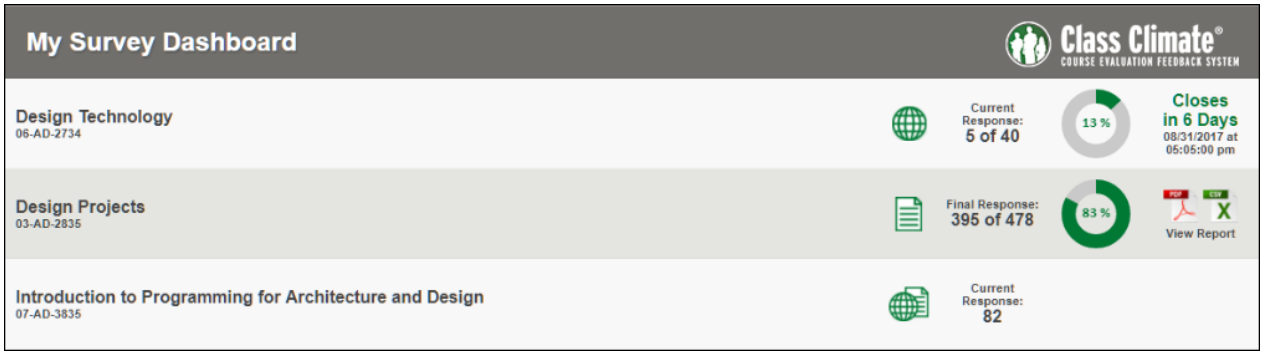

Figure 2: Instructor Dashboard

The tool can be configured to provide access or not to course evaluation results such as PDF or CSV and can be displayed directly into your LMS portal.

The minimum version of Class Climate required is version 7.0 (2100). Please ensure that the current version of your LMS supports IMS LTI®.

To ensure a smooth implementation, you must have a Tested network route on port 443 between both servers. Load Balancer, Firewall, proxy servers must be configured adequately.

2. Configuring LTI for Class Climate

2.1. Activating LTI®

The LTI interface can be activated directly in the Class Climate administrator interface. To do this, go to “System Settings / Interfaces & Plug-ins” and open the tab “LTI® Interface”.

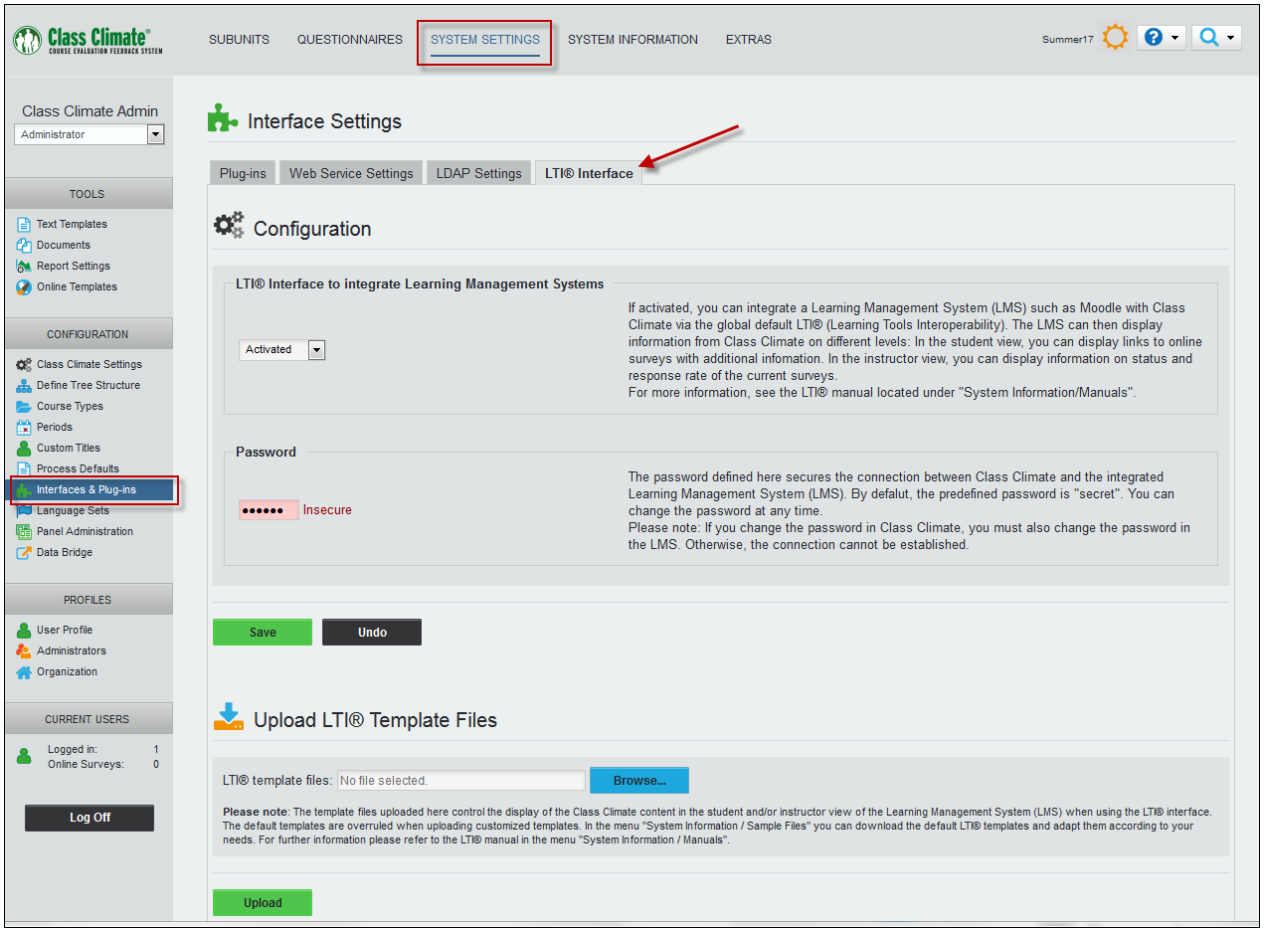

Figure 3: Activate LTI® Interface

Here you can activate the option “LTI® Interface to integrate Learning Management Systems”.

If you have done so, you can define a password which secures the connection between the Class Climate server and the integrated LMS. The default password is “secret”. Please note: If you change the password here, it must be changed in the LMS configuration as well too to work properly.

At the bottom of the page you can upload your own customized LTI® templates. If you do not upload customized templates, the default template will be used. For further information, see below chapter 2.2.

2.2. Default LTI Templates

The layout of the Class Climate survey block for learners and instructors is defined by templates. There are four default templates:

- **Instructor_template.html**

  Defines the layout and content of the header and footer in the instructor view

- **Instructor_survey_block_template.html**

  Defines the content of the survey block within the instructor view (content repeated per survey)

- **Learner_survey_block_template.html**

  Defines the layout and content of the header and footer in the learner view

- **Learner_template.html**

  Defines the content of the survey block within the learner view (content repeated per survey)

The information displayed in the instructor and learner view is defined by the help of placeholders.

In the instructor view, by default the following information is displayed:

- Course name
- Course code
- Response Rate
- Enrollment number
- Open until…
- Status

Figure 4: Instructor View

In the learner view, by default the following information is displayed:

- Course name
- Course code
- Instructor name
- Open until…
- Take Survey Button

Figure 5: Learner View

In both dashboards, the surveys of the current survey period are displayed by default. If there is no survey available, a corresponding message will be viewed by the learner.

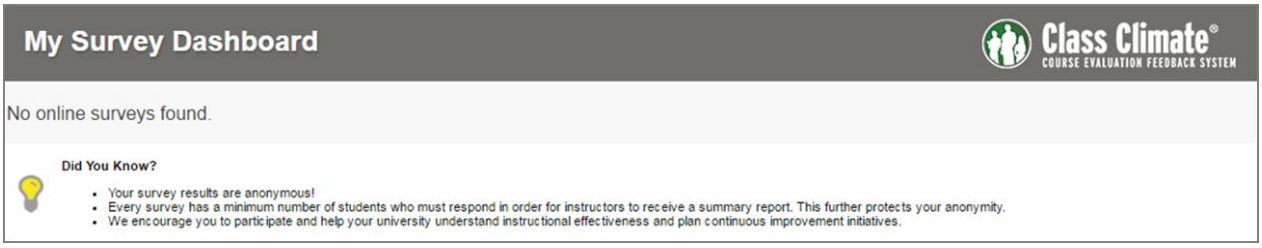

Figure 6: No surveys found

2.3. Customizing your LTI Connector

If you wish to adapt the content and layout displayed in your LMS, you can customize the LTI templates as well as the stylesheets. To do so, please download the original default templates in the menu “System Information/Sample Files”:

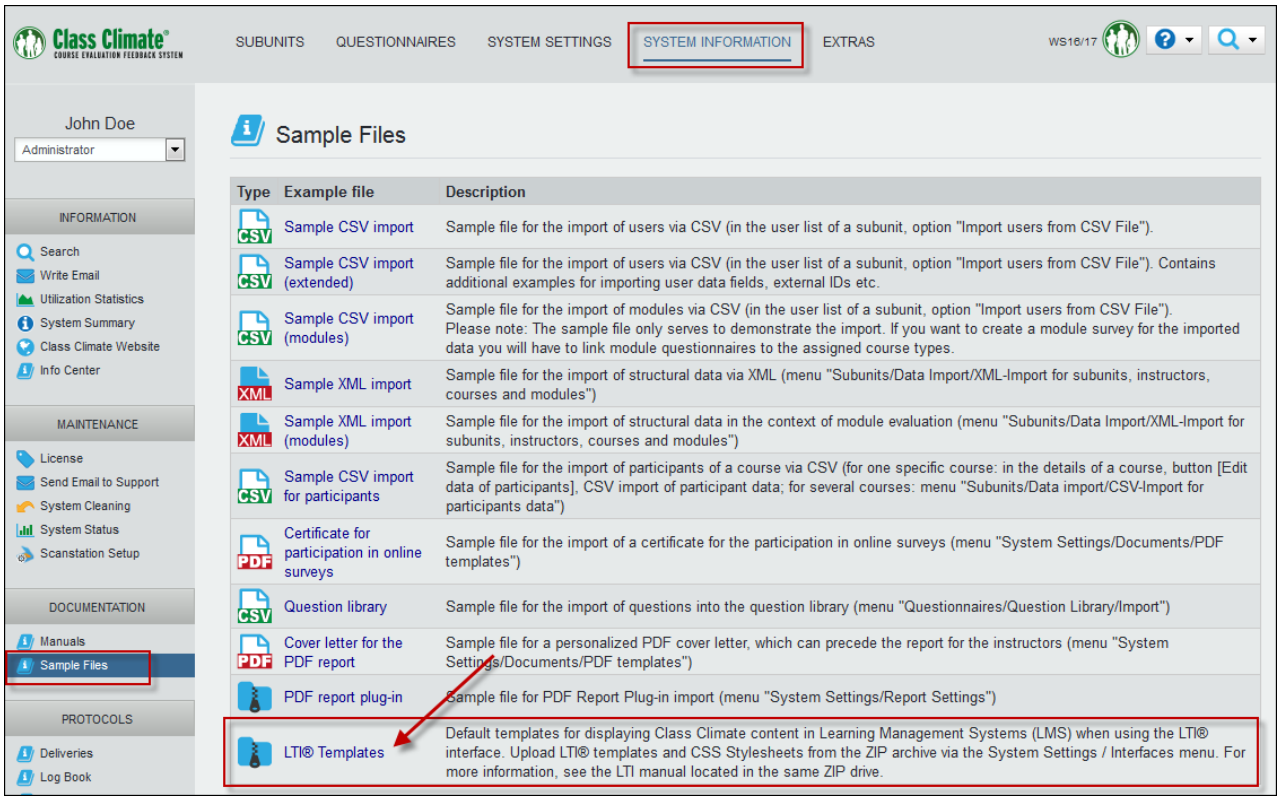

Figure 7: Download the default templates

The zip archive contains the four templates described in chapter 2.2 Default LTI Templates as well as the css stylesheets for the learner and instructor view (instructor.css and learner.css). In addition, it contains the LTI manual.

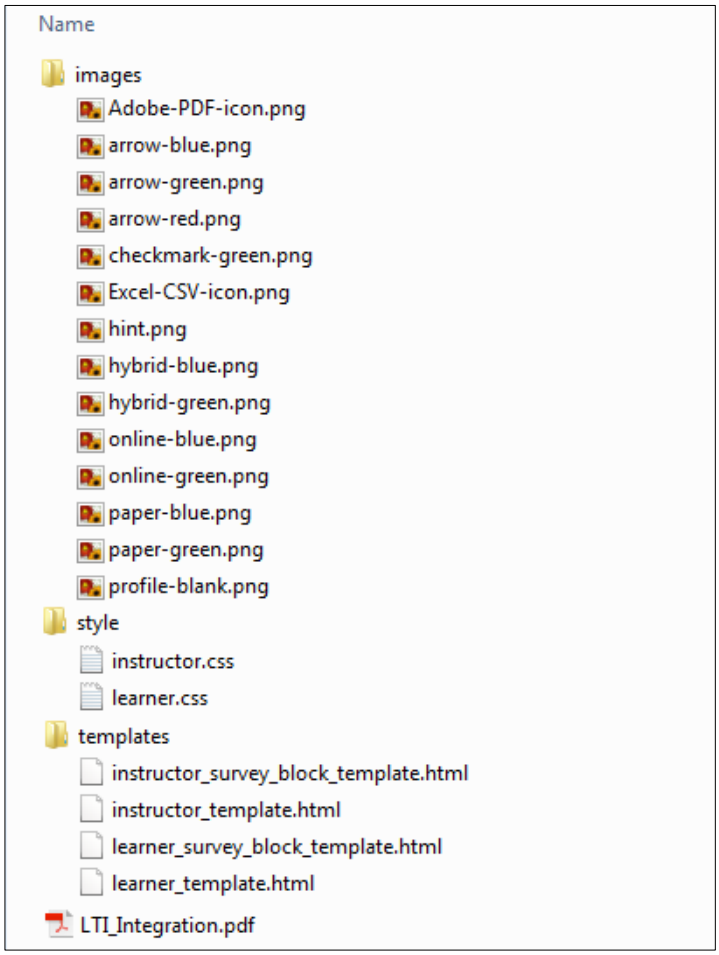

Figure 8: Content of the zip archive

2.3.1. Customize Templates

You can adapt the html templates to define which kind of survey data shall be displayed in the LMS and/or define logical conditions within the templates (using Java Script). The following list shows all placeholders which can be used in the templates:

Instructor & Learner Template	Description
[SURVEY_ID]	Internal Class Climate survey ID (e.g. 15306)
[SURVEY_NAME]	Name of the survey (e.g. Web Design)
[COURSE_CODE]	Course code (e.g. Co-002-A)
[INSTRUCTOR_NAME]	Name of the instructor (title, first name, surname) (e.g. Prof. Donna Harwood)
[INSTRUCTOR_IMAGE]	Path to the image of the main instructor
[SURVEY_STATUS]	Current status (e.g. In Progress, Data available)
[SURVEY_TYPE_IMAGE]	Link to graphic indicating the survey type (online.png, hybrid.png or paper.png); graphics are stored in subfolder “customer\LTI\images”
[SURVEY_TYPE_NAME]	Survey Type (“Online Survey”, “Hybrid Survey”, “Paper Survey”)
[SURVEY_IS_ANONYMOUS]	Logical condition, value true / false
[SURVEY_IS_OPEN]	Logical condition, value true/ false
[SURVEY_PERIOD]	Survey period (e.g. 2016-1)
[SURVEY_CREATION_DATE]	Date of survey creation (e.g. 02/25/2016 at 09:18:04 am)
[SURVEY_SCHEDULED_START_DATE]	Start date defined in Scheduled Tasks (Task “PSWD to respondents”) (e.g. 02/29/2016 at 09:30:00 am)
[SURVEY_SCHEDULED_END_DATE]	End date defined in Scheduled Tasks (Task “Finish survey”) (e.g. 03/14/2016 at 06:00:00 pm)
[SURVEY_LAST_COLLECTION]	Date of last data collection (e.g. 03/07/2016 at 09:18:04 am)
[SURVEY_ENROLLMENT]	Number of course participants (e.g. 20)
[SURVEY_RESPONSES]	Number of responses (e.g. 18)

[SURVEY_RESPONSE_RATE]	Response Rate (e.g. 90) (consider method to calculate response rate in Class Climate, see information below)
[SECONDARY_INSTRUCTOR_NAMES]	Names of all secondary instructors divided by "|" (Pipe)
[SECONDARY_INSTRUCTOR_IMAGES]	List of all paths to the images of the secondary instructors divided by "|" (Pipe)
[LOAD_INSTRUCTOR_IMAGE]	Boolean ("True"/"False"), linked to the request parameter "learner_load_instructor_images"

Learner Template Only	Description
[DIRECT_ONLINE_LINK]	Direct link to online survey including PSWD
[PARTICIPATED]	Logical condition, value true/ false
[LEARNER_RESULT_ACCESS]	Boolean ("True"/"False"), linked to the option "Allow result access" in the questionnaire details
[LEARNER_RESULT_ACCESS_LINK]	Direct link to the HTML report view. Result access is limited to surveys in current period(s).

Instructor Template Only	Description
[PDF_REPORT_PATH]	URL to PDF report
[CSV_EXPORT_PATH]	URL to CSV export

After you have changed the HTML templates, please re-start the "memcached service" on the Class Climate server to ensure that the changes are taken over correctly.

In the example below, you can see an adapted HTML template. In this case, result access for students has been activated by means of the parameters [LEARNER_RESULT_ACCESS] and [LEARNER_RESULT_ACCESS_LINK]:

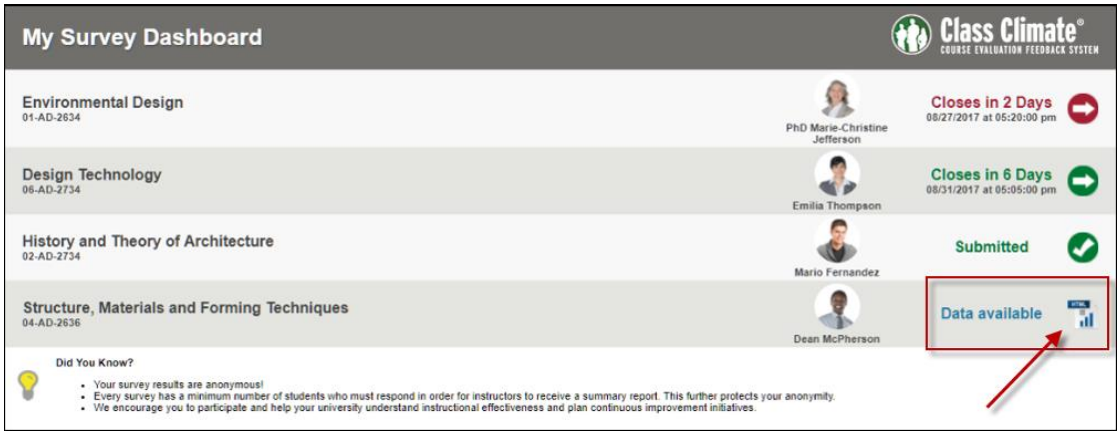

Figure 9: Learner View: Access HTML report via LTI

The results are displayed in the student view of your LMS as soon as the survey in Class Climate has been closed. Only closed surveys for the current evaluation period will be displayed.

Please note: To use this feature, as a prerequisite, you have to grant result access for the questionnaire used for your Class Climate survey.

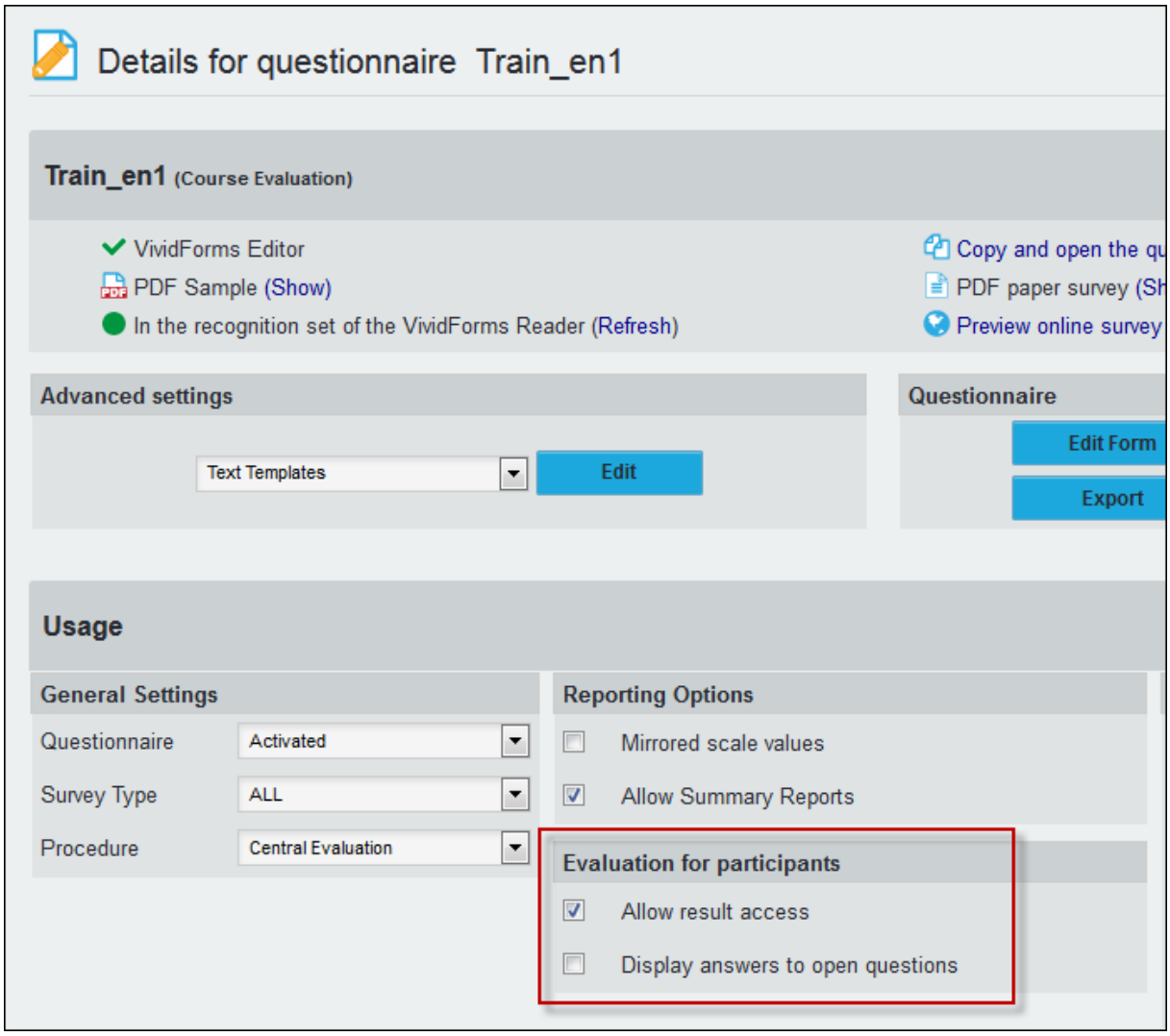

Figure 10: Allow result access for a questionnaire

2.3.2. CSS Style Sheet

Additionally, you can adapt the CSS style sheets to change settings for fonts, colors, margins etc.

2.3.3. Upload templates

After you have done your changes to the html and css files, you can upload the templates in the menu “System Settings / Interfaces & Plug-ins”, tab “LTI® Interface”. Before uploading the files, please add them to a zip archive.

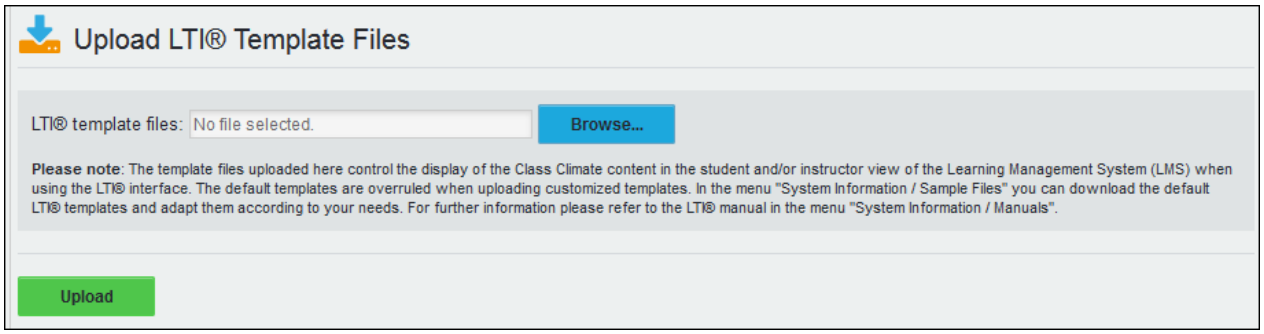

Figure 11: Upload template files

Please note: The default templates are overruled when uploading customized templates. In the menu “System Information / Sample Files” you can download the original default LTI® templates again at any time.

2.3.4. Customize Images

If you wish to customize the images used for the display of survey types (placeholder [SURVEY_TYPE_IMAGE]), you have to change the image files directly on the Class Climate server.

- *:\Apache\htdocs\classclimate\customer\LTI\images
- *:\Inetpub\wwwroot\classclimate\customer\LTI\images

You can substitute the images with your own, keeping the correct file format and file name (online.png, paper.png, hybrid.png).

2.3.5. LMS Custom Parameters

Use the dashboard to add custom parameters directly in your LMS.

They can be divided in 2 types:

Learner

- order_by_survey_close_date
- learner_survey_types
- learner_show_completed_surveys
- learner_load_instructor_images
- learner_lms_identifier
- learner_provider_identifier

Instructor

- order_by_survey_close_date
- instructor_survey_types
- instructor_show_past_surveys_for_n_previous_periods
- instructor_survey_data_access_for_n_previous_periods
- instructor_show_report
- instructor_show_export
- instructor_plugin_response
- instructor_lms_identifier

2.3.6. Learner Custom Parameters

order_by_survey_close_date = 0 or 1

Defines, if surveys in the learner and instructor view are ordered alphabetically (0) or by survey close date (1)

learner_survey_types = pipe separated “o”, “h” (e.g. “o|h” for online & hybrid surveys only)

Defines, which types of surveys are displayed in the learner view;
o = online, h = hybrid

Default: o|h

learner_show_completed_surveys = 0 or 1

Defines, if only open surveys are displayed in the survey list of the learner view (0) or if also completed surveys are displayed (1)

Default: 0 (only open surveys)

learner_load_instructor_images = 0 or 1

Defines the ability to display the instructor profile picture uploading in Class Climate within the placeholders INSTRUCTOR_IMAGE, SECONDARY_INSTRUCTOR_IMAGES (1)
Sets the placeholder LOAD_INSTRUCTOR_IMAGE
Default: 0

learner_lms_identifier = any parameter from the LTI request (e.g. “ext_user_username”)

Defines, which parameter from the LTI request should be used as identifier instead of the email address. Use this parameter in case the email address in the LMS differs from the email address of the participant in Class Climate.

Default: “” (the email address is taken as identifier)

learner_provider_identifier = “custom1”, “custom2”, “custom3”

Defines, which custom field of the participant in Class Climate should be used as identifier instead of the email address (e.g. if you use the LMS username as identifier, it has to be imported as a custom field of the participant)

Default: “” (the email address is taken as identifier)

2.3.7. Instructor Custom Parameter

instructor_survey_types = pipe separated “o”, “h”, “p” (e.g. “o|h” for online & hybrid surveys only)

Defines, which types of surveys are displayed in the survey list in the instructor view; o = online, h = hybrid, p = paper

Default: o|h|p

instructor_show_report = 0 or 1

Defines, if PDF survey reports can be opened via the survey list in the instructor view (1) or if not (0)

Default: 0 (no report)

Please note: If you activate the report function, this may increase the workload on the Class Climate server and thereby affect performance.

instructor_show_export= 0 or 1

Defines, if raw data for closed surveys can be opened via the survey list in the instructor view (1) or if not (0)

Default: 0 (no export)

Please note: If you activate the export function, this may increase the workload on the Class Climate server and thereby affect performance.

instructor_show_past_surveys_for_n_previous_periods = 0 to X

Defines, if only surveys of the current survey period are displayed (0) or if surveys of former periods are displayed as well.

Default: 0 (only current surveys). X would be the number of past periods (X is a positive integer)

instructor_survey_data_access_for_n_previous_periods = 0 to X

Defines, if you want to display survey information for a particular number of past periods.

Default: 0 (only current surveys). X would be the number of past periods (X is a positive integer)

order_by_survey_close_date = 0 or 1

Defines, if surveys in the learner and instructor view are ordered alphabetically (0) or by survey close date (1)

instructor_plugin_response = the plug-in name (e.g. BringYourOwnDevice)

Defines, if the survey list in the instructor view should be replaced by a plug-in content. All plug-ins, which are available for the instructor user role, can be displayed in the LMS. The instructor is automatically logged in and the default instructor view is replaced by the plug-in content. Below, you can see a sample of the plug-in "Bring your own device" displayed in Moodle:

Figure 12: Plug-in in Moodle

Apart from the plug-ins provided by Scantron you can also use your own plug-ins to be displayed in the LMS. The plug-in which you would like to show first has to be uploaded via the Class Climate menu "Interfaces & Plug-ins". After this, it can be called via LTI with the help of the custom parameter.

Please note that the plug-in will substitute the instructor's survey list which is displayed by default, so it will be displayed instead of the survey list.

instructor_lms_identifier = any parameter from the LTI request (e.g. "ext_user_username")

Defines, which parameter from the LTI request should be used as identifier instead of the email address. Use this parameter in case the email address in the LMS differs from the email address of the instructor in Class Climate.

Please note: If you use this parameter, the identifier is matched against the external ID of the instructor. Therefore, the usage of external IDs must be activated in Class Climate.

Default: "" (the email address is taken as identifier)

2.4. Settings within Class Climate

The unique identifier and connector for instructors and learners is the email-address stored in Class Climate and in the LMS tool you are using.

2.4.1. Learner Settings

In case of learners, the system checks for each learner stored in the LMS database which of the open online surveys running on the Class Climate server contains the same learner's email address. If there are open online surveys for an email address, the surveys will be displayed in the learners LMS account.

When you set up or import courses in Class Climate, it is therefore necessary to also import the participants email addresses for each course.

Participants can be imported in a CSV file format that includes a course ID followed by an e-mail address for each line.

Example:

MA05Wiw2; person01@localserver.com

MA05Wiw2; person02@localserver.com

MA05Wiw2; person03@localserver.com

MA05Con; person01@localserver.com

MA05Con; person03@localserver.com

MA05Con; person04@localserver.com

MA05Con; person05@localserver.com

This example shows two courses with three and four participants each. Some of the participants are attending both courses, some only one of both.

Before importing the participant data into Class Climate you will need to setup the subunits, questionnaires, instructors and courses. It is essential that the course IDs set for the courses are identical to those being used in the participant import file since they serve as a reference.

It is possible to use a different identifier than the e-mail address. In this case, it is necessary to import the identifier by using the additional fields for participant information. When importing the participant data for an anonymous survey, the course ID and the email address, as well as the LMS user name, are uploaded. An example CSV import file could look like this:

Course ID	Email address					Custom field 1	Custom field 2	Custom field 3
A	B	C	D	E	F	G	H	I
VWL006	t1@example.com					LMS User Name 1		
VWL006	t2@example.com					LMS User Name 2		
VWL006	t3@example.com					LMS User Name 3		
VWL006	t4@example.com					LMS User Name 4		
VWL006	t5@example.com					LMS User Name 5		

Figure 13: Import file with LTI name in the custom field

Please note that you have to adhere to the correct format of the import file. In LTI you have to define which of the Class Climate user data fields has to be matched with the LMS user name.

Please refer to chapter 2.2.3 “Import of Course Participants’ Email Addresses” of the Class Climate User Guide for more information about the participants’ data import process.

Scantron also offers professional services to help convert your data into the XML format needed by Class Climate. It is also possible to create the courses manually within the Class Climate interface or to create simpler, Excel-based CSV import files for each subunit. Please refer to section 2.2.1 “CSV-Import within Subunits” of the Class Climate User Guide for more information about the CSV import process.

2.4.2. Instructor Settings

In case of instructors, the instructor’s email address has to be defined in the corresponding Class Climate user profile as well as in his LMS user profile. The system checks for each instructor stored in the LMS database which surveys are available for the instructor’s email address and displays the surveys in the instructor’s LMS account.

It is possible to use an external ID instead of the e-mail address. In this case it is necessary to set an external ID for the instructors. The LMS name used in the LMS must match with the information stored in the “External ID” field of the instructor.

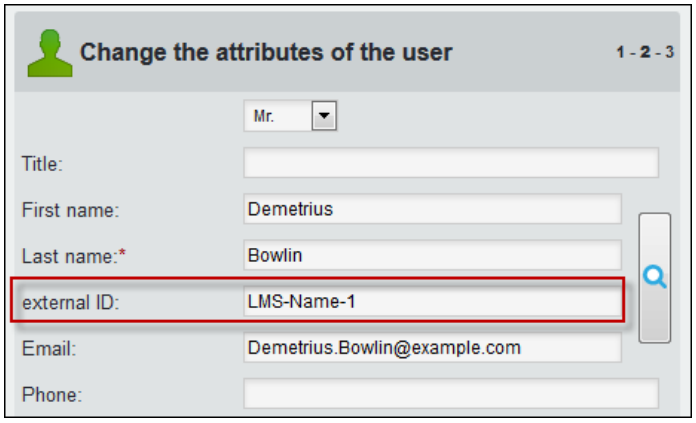

Figure 14: Instructor’s external ID

Of course, you can also import this information. When doing a CSV import, you have to use a column with the column label USER_EXTERNAL_ID. For further information on external IDs please refer to the Class Climate User Guide.

Please note: If an instructor is stored in more than one Class Climate subunit with the same email address, then the survey data can only be displayed in the instructor's LMS account if you are using External IDs to connect the instructor accounts in Class Climate. If you do not use External IDs, then the data will not be displayed!

The same is true for courses or modules with secondary instructors: The data of these surveys will not be displayed in the instructor's LMS account if there is no External ID defined for the instructor.

The use of External IDs is not activated by default. To activate the function, go to "System Settings / Class Climate Settings / Functions / General" and activate the option "Display external ID".

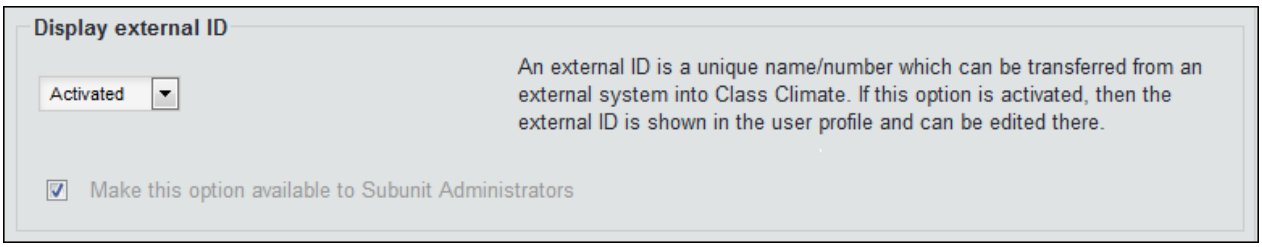

Figure 15: Activate External ID

When activated, for each instructor an External ID can be defined or imported. For further information on the use of External IDs please refer to the Class Climate User Guide, chapter 2.1.2 "Generating and Managing User Accounts", section "Using External IDs".

In order to display survey data of courses an instructor is defined for as secondary instructor (e.g. module courses), the corresponding setting has to be activated in the Class Climate settings as well. To do this, go to "System Settings / Class Climate Settings / Data Privacy" and activate the option "View reports as secondary instructor".

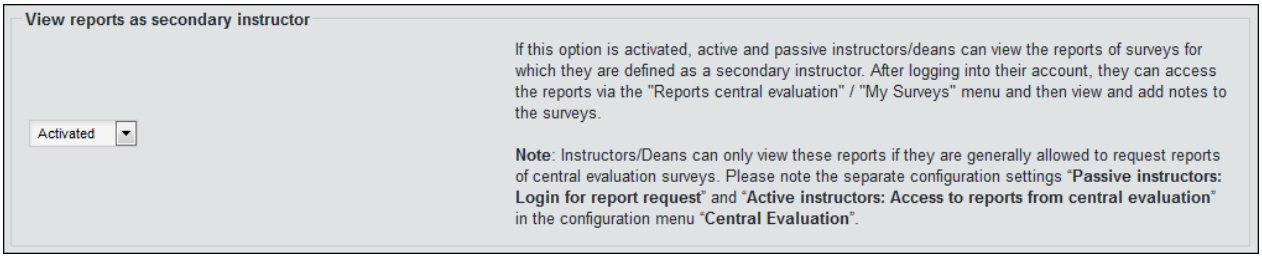

Figure 16: View reports as secondary instructor

2.4.3. Survey Settings

In the learners view, by default only those online surveys are displayed which are currently open. Surveys which have been prepared but are still closed, or surveys which have been finished, will not be displayed.

The easiest way to control the display of online surveys in the learner's view is via the Class Climate "Scheduled Tasks". If you create your online surveys in Class Climate, you can activate "Time Control" and define a date when to "Send PSWDs to respondents" and when to "Finish Survey". Within the time frame of these two scheduled tasks the survey will be displayed in the LMS student's view.

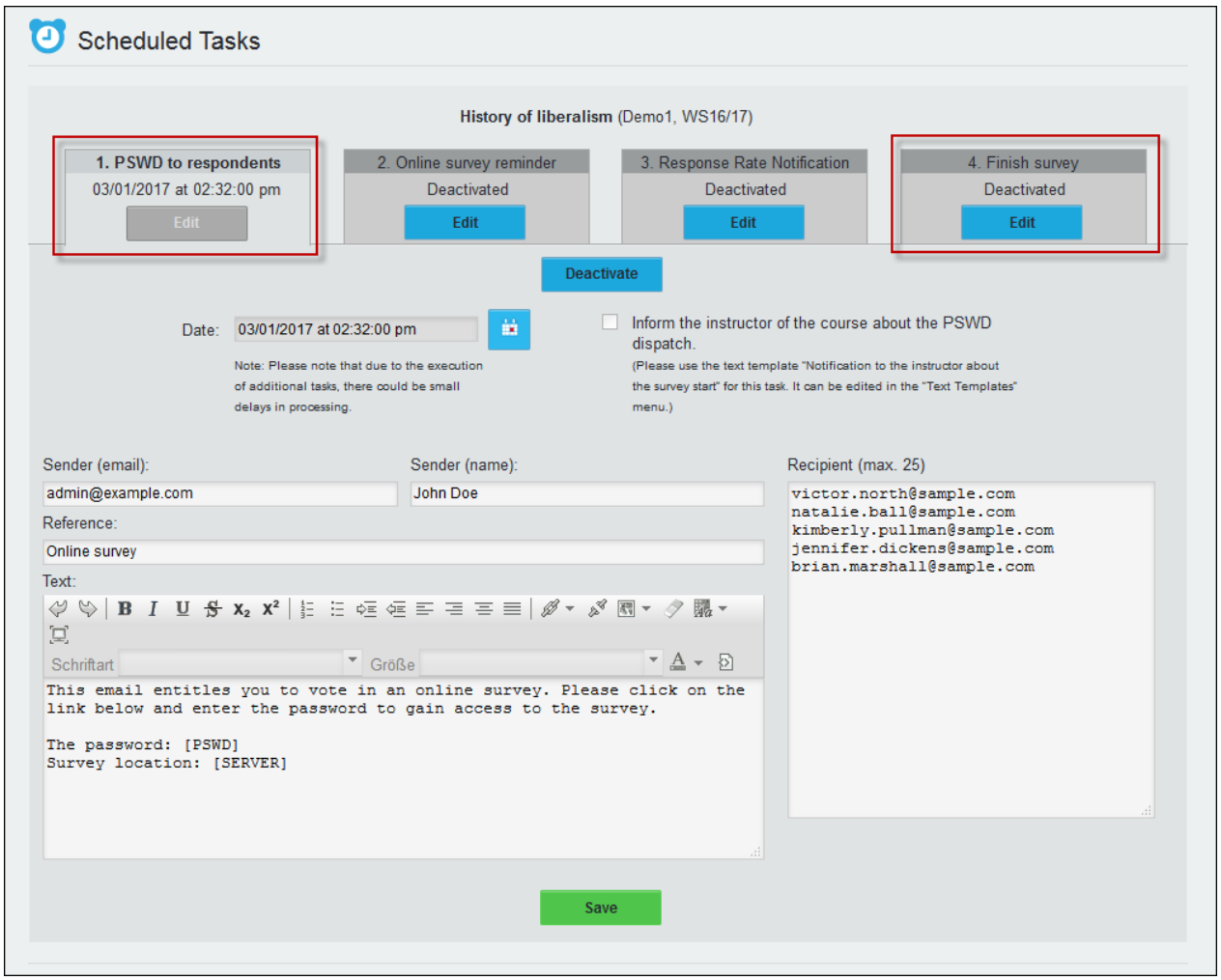

Figure 17: Define Scheduled Tasks

If you are using "Scheduled Tasks", you should activate the option "Prevent premature display of surveys in LMS" in "System Settings / Class Climate Settings / Survey Online". This way, the links to online surveys will not be displayed directly after the survey has been generated, but only after the first Scheduled Task date.

If you do not activate this option, the survey will be displayed directly after survey generation.

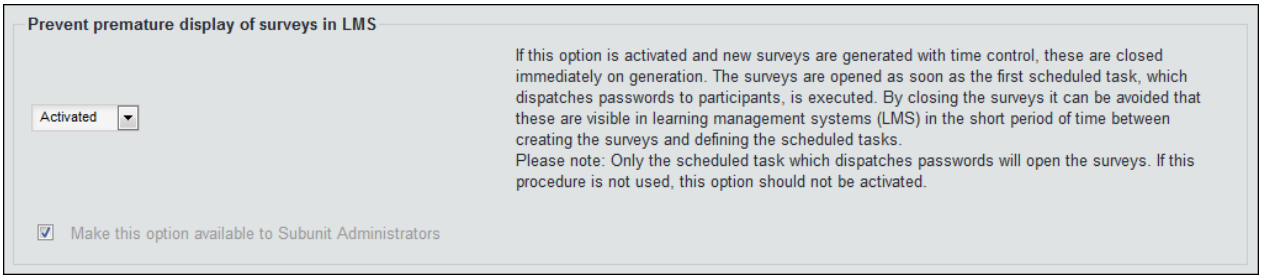

Figure 18: Prevent premature display of surveys in LMS

If desired, you can inform the instructor about the survey start when sending the PSWDs by activating the corresponding checkbox in the “Scheduled Tasks” (see above figure Figure 17). This way, the instructor can be notified that there will be a new survey displayed in the instructor view. There is a text template available in the menu “System Settings / Text Templates” so that the email text can be adapted beforehand.

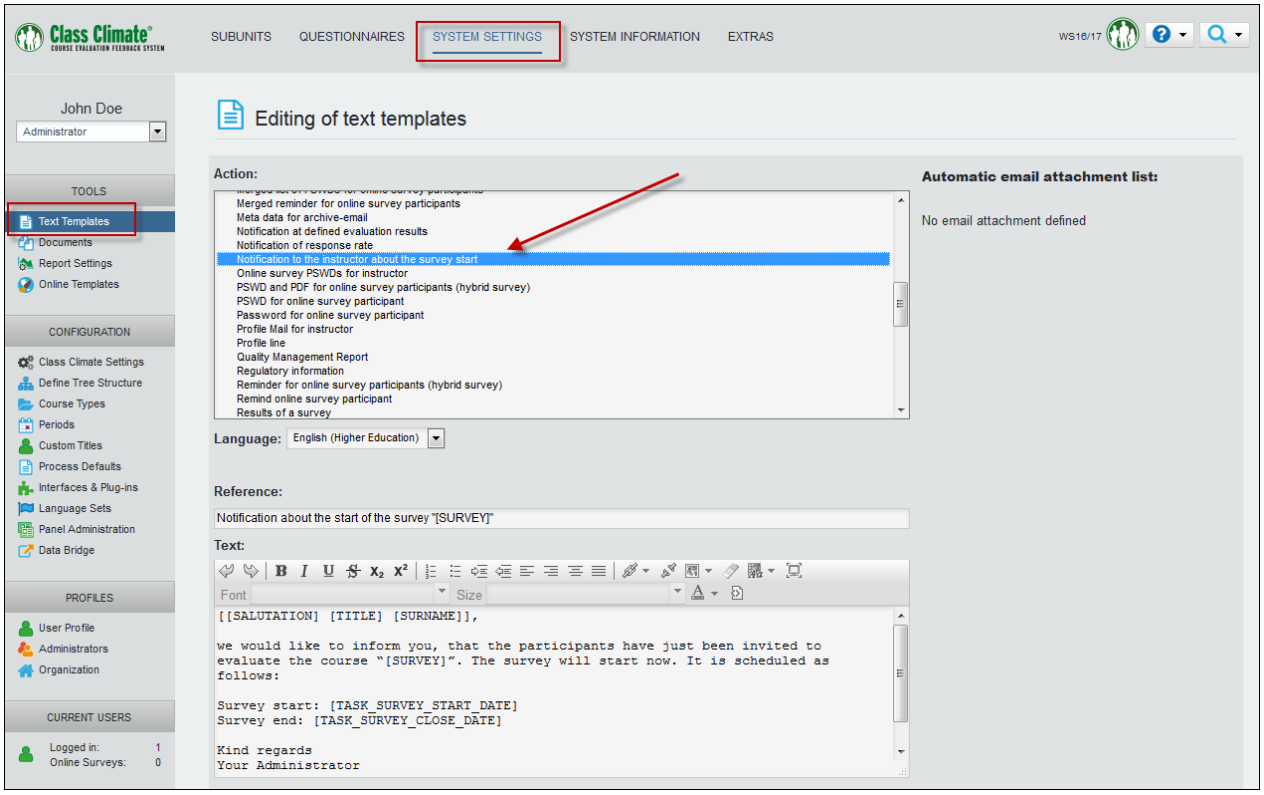

Figure 19: Informing the instructor about the survey start

For further information on Scheduled Tasks please refer to the Class Climate User Guide, chapter 3.10.1 “Time Control”.

If you do not wish to work with Scheduled Tasks, you can also manually control the display of surveys in the LMS by manually locking and unlocking the online surveys.

You can lock or unlock each survey individually in the survey list or survey details by clicking on the lock icon, or you can lock and unlock all surveys of the current period for

a whole subunit by clicking on the lock icon below the user list. This helps you control the visibility of available online surveys in the LMS.

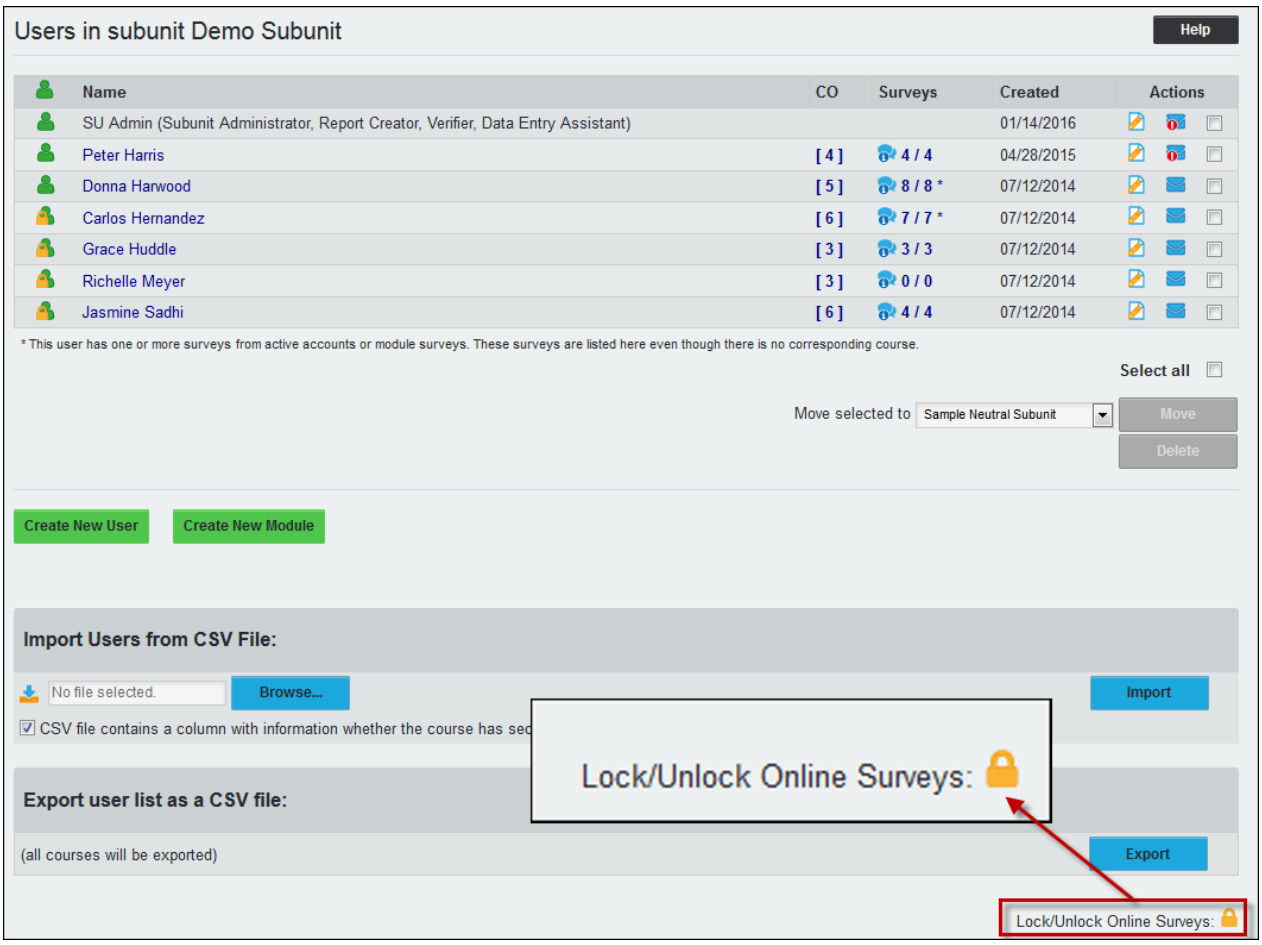

Figure 20: Lock / Unlock Online Surveys

In the default instructor's view, all surveys of the current evaluation period are displayed, independent of the survey status.

3. Configuring LTI for Learning Management Systems (LMS)

The following chapters will explain how to set up the LTI connection to Class Climate in the different LMS tools.

3.1. Blackboard

To connect Class Climate and Blackboard via LTI, a new LTI tool has to be added and configured in Blackboard. In the following chapters, the relevant steps are described.

3.1.1. Adding a new LTI Tool

Log in to Blackboard as administrator.

Select “System Admin” from the top navigation bar, then select Building Blocks.

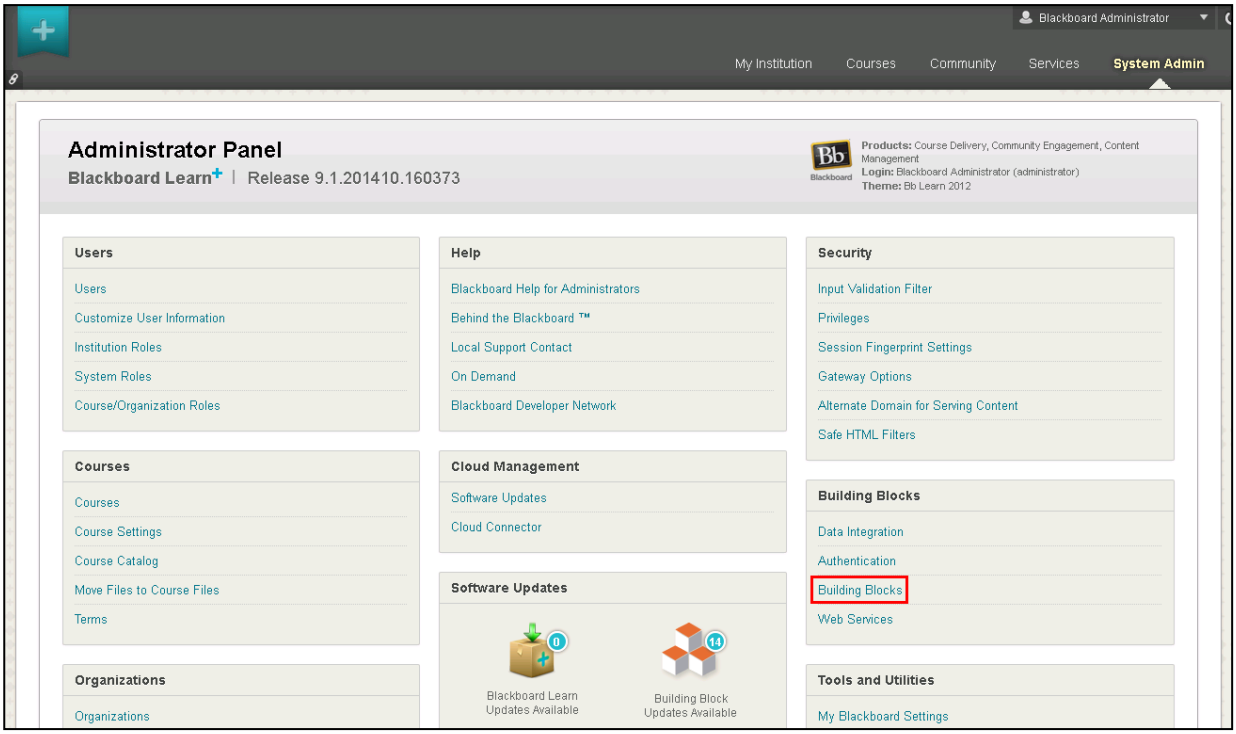

Figure 21: Building Blocks

Next, select LTI Tool Providers.

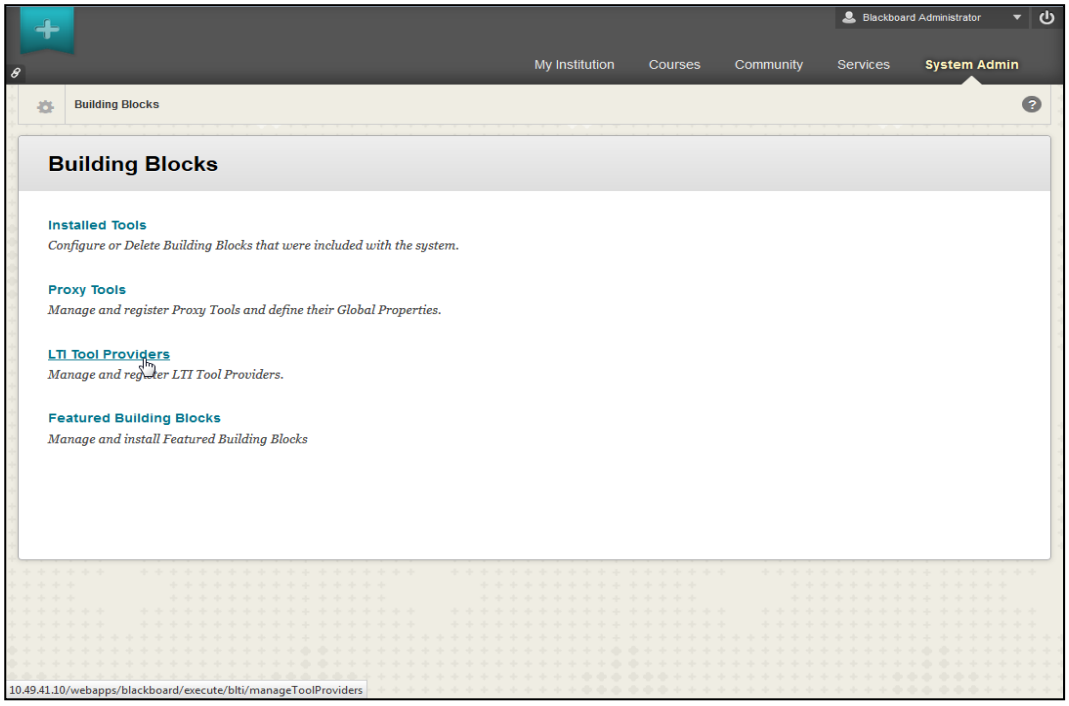

Figure 22: LTI Tool Providers

Use the Register Provider Domain option to create additional LTI Tool Providers.

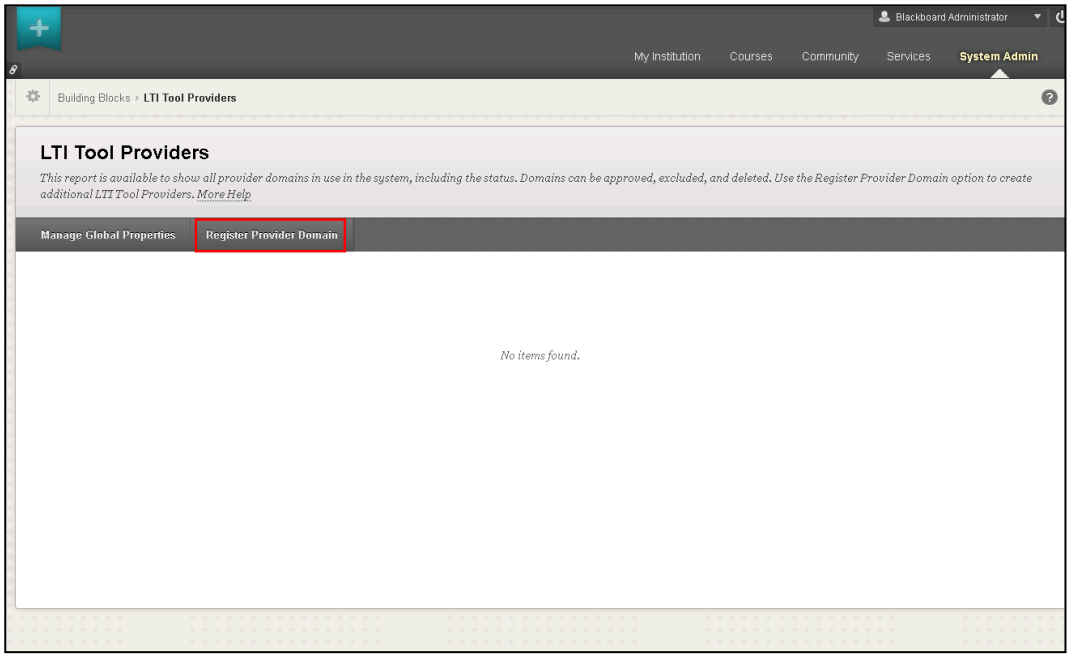

Figure 23: Register Provider Domain

3.1.2. Editing LTI Tool

This section contains the mandatory properties of the tool:

- Provider Domain
- Default Configuration
- Tool Provider Key
- Tool Provider Secret
- Send User Date
- User Fields to Send

The Provider Domain should be the IP or hostname of your Class Climate system and must be a HTTPS URL without any parameters, similar to this:

https://<hostname>/classclimate/customer/lti/lti_provider.php.

For “Default Configuration” choose “Set globally”.

The “Tool Provider Key” is “12345”.

The “Tool Provider Secret” is defined in the Class Climate menu “Interfaces and Plug-ins / LTI® Interface” (see above chapter 2.1).

In the “Tool Provider Custom Parameters” box you may add one or more of the parameters described in the section LMS Custom Parameters.

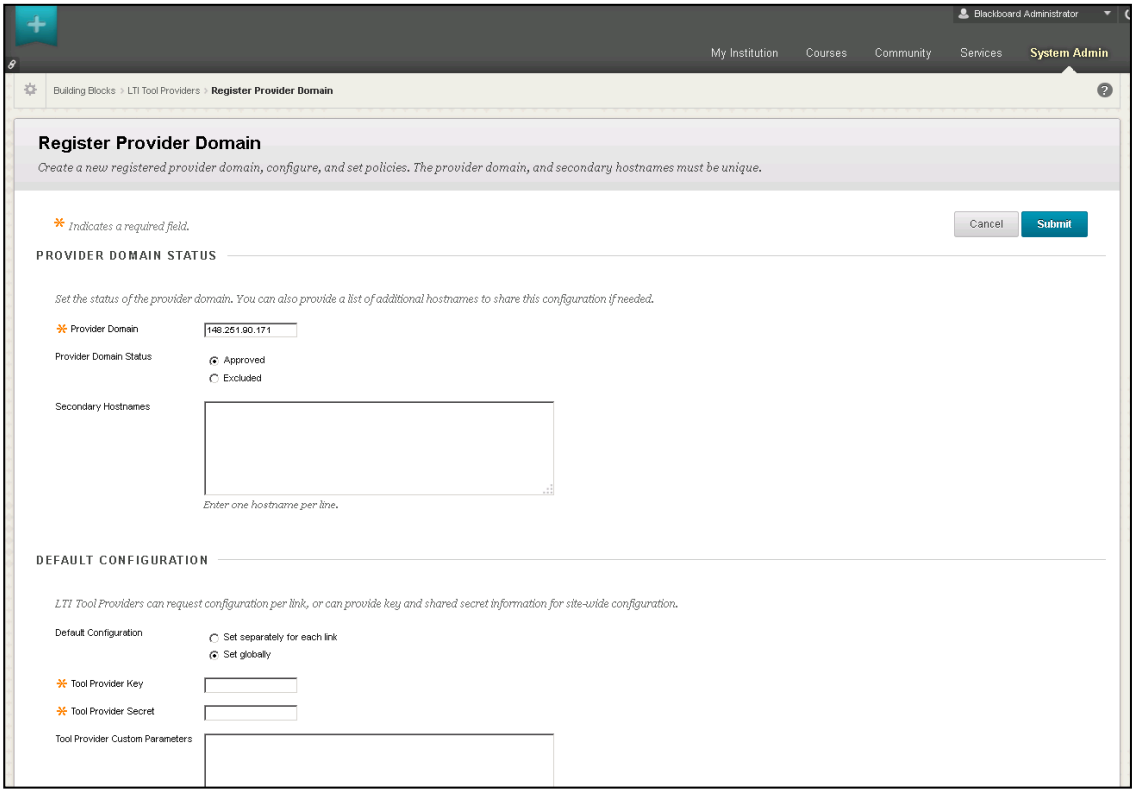

Figure 24: Register Provider Domain settings I

In the “Institution Policies” section, the option “Send User Data” should be set to “Send user data over any connection”. As “User Fields to send” select “Email Address” and “Role in Course”.

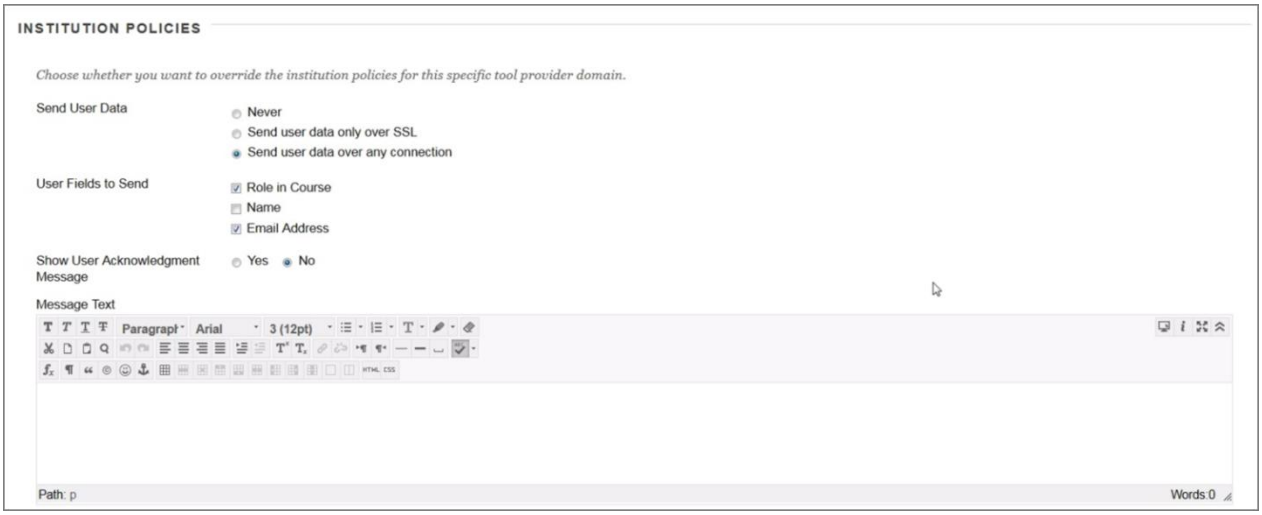

Figure 25: Register Provider Domain settings II

After setting all these details, press “Submit” to create the LTI Tool.

3.1.3. Managing Placement

In order to reach the LTI Tool logged in as a student, a placement has to be created, which includes all the basic settings (displayed name, tool provider URL etc.).

Press “Manage Placement” and then “Create Placement” to set the placement’s details.

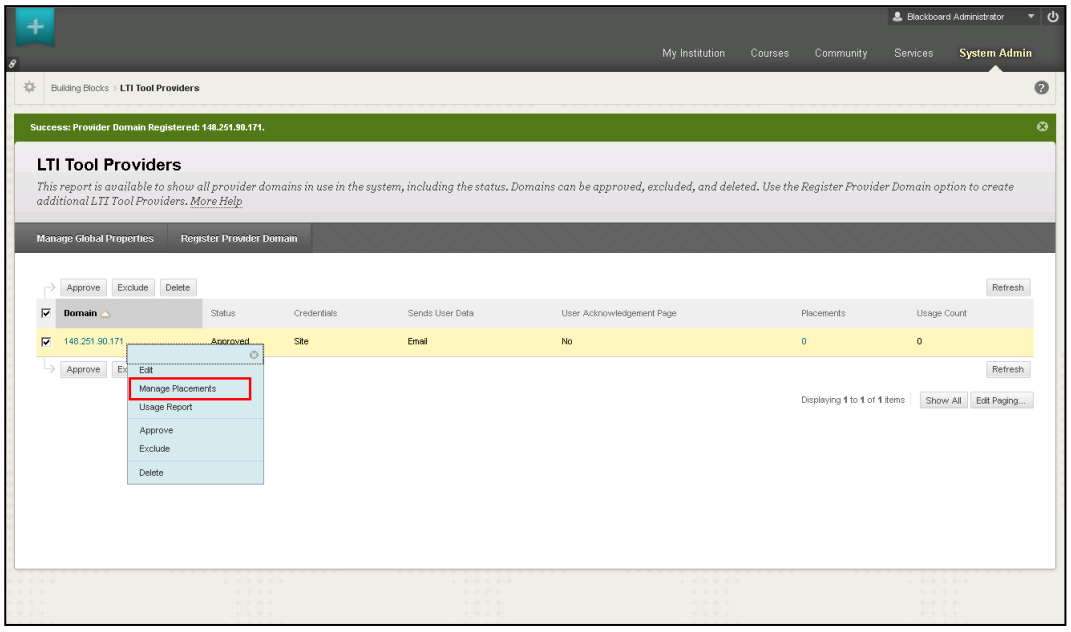

Figure 26: Manage Placements

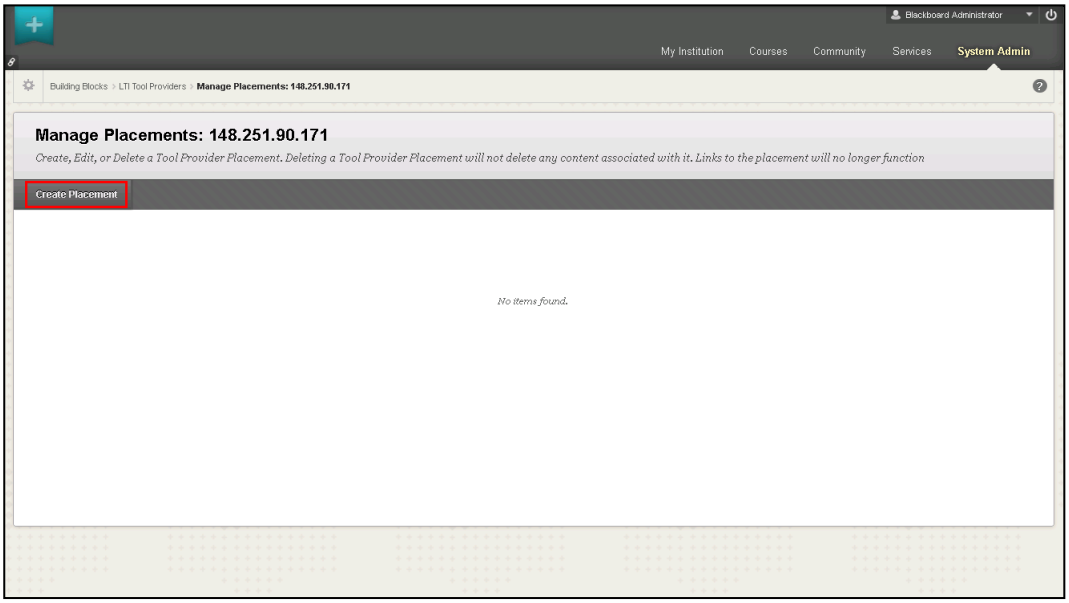

Figure 27: Create Placement I.

First, define the name of the LTI Tool, that the students would see (Label), then the unique name of the placement (Handle). The type should be set to Student Tool.

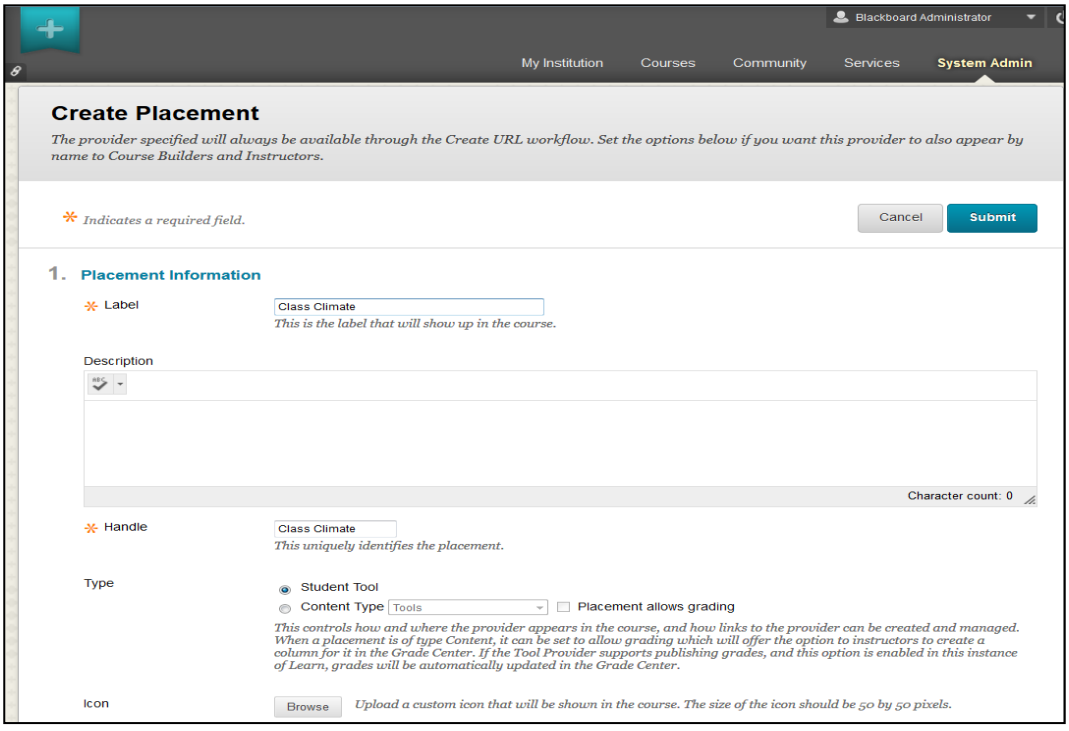

Figure 28: Create Placement II.

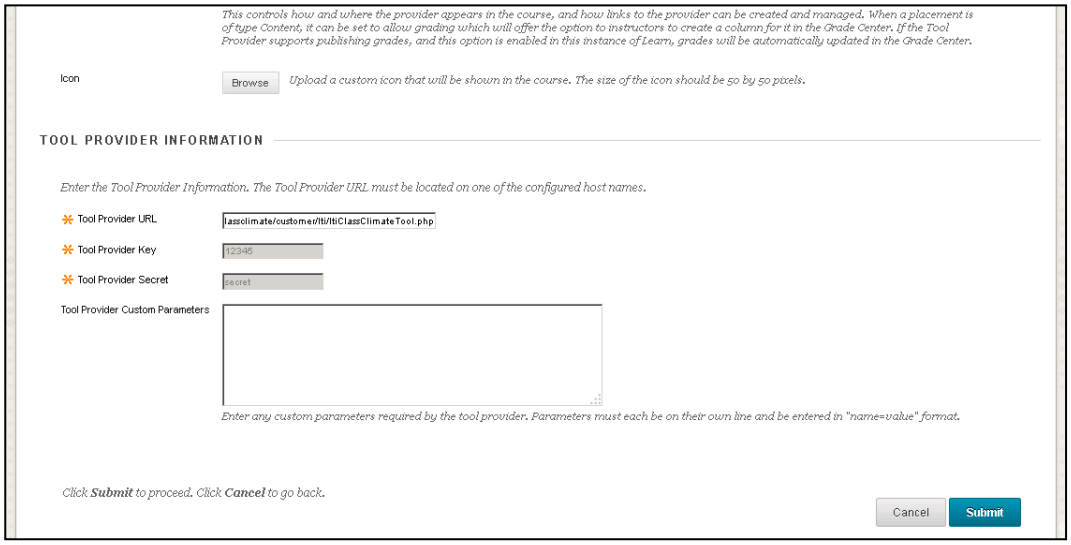

Figure 29: Create Placement III.

Once the settings are done, press "Submit".

Add the Tool link to the table of content. This can be added globally.

3.1.4. Blackboard Sample Screenshots

Class Climate LTI Integration in Blackboard:

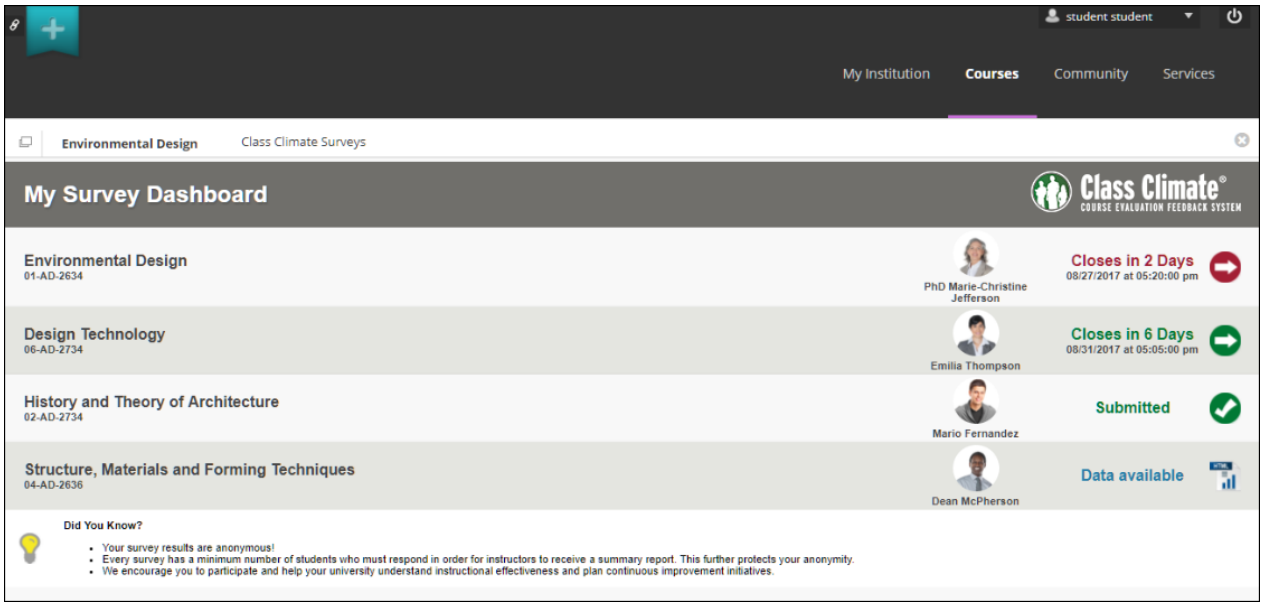

Figure 30: Blackboard Student View

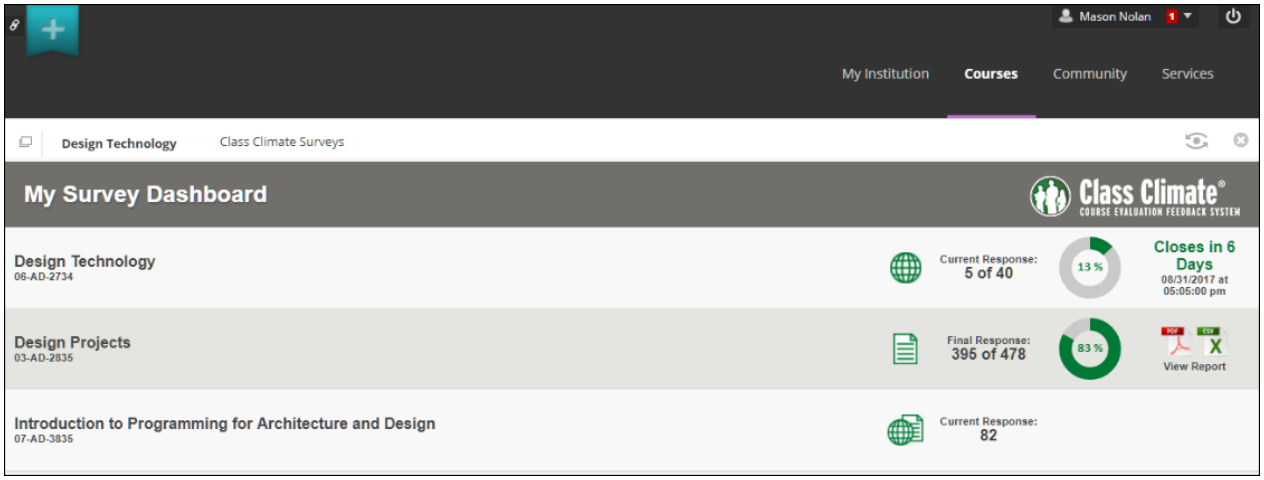

Figure 31: Blackboard Lecturer View

3.2. Moodle

To connect Class Climate and Moodle via LTI, a new LTI tool has to be added and configured in Moodle. In the following chapters, the relevant steps are described.

3.2.1. Adding a new LTI Tool

To add a new LTI tool, log in to Moodle as an administrator and turn on editing by clicking the option “Turn editing on” in the “Administration” section.

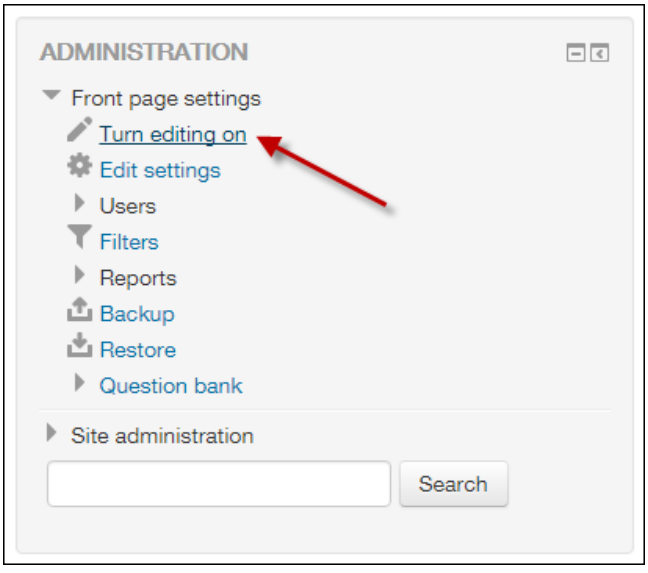

Figure 32: Turning editing on

Open the drop-down list, “Add an activity…“. Select the option “External tool”.

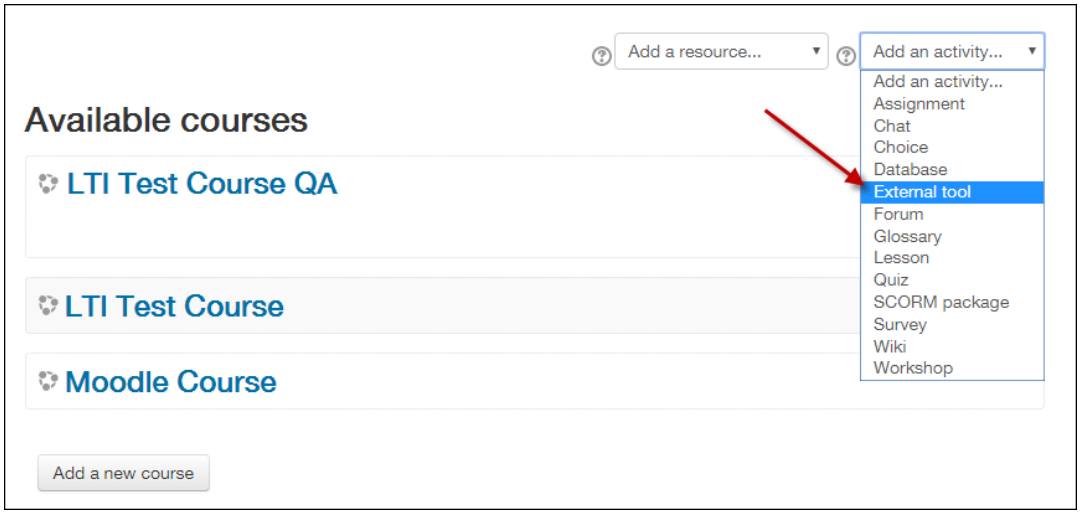

Figure 33: Add External Tool

Click the + icon next to “Preconfigured tool”.

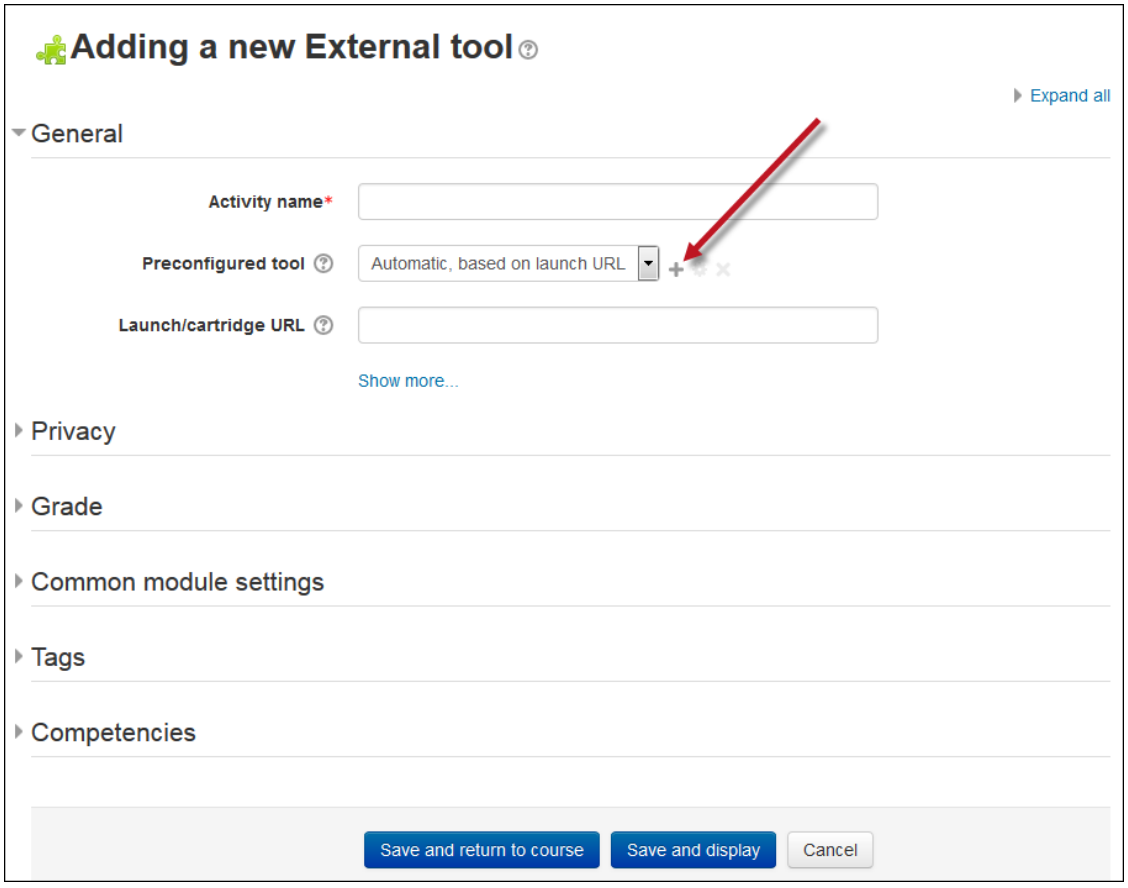

Figure 34: Add a new external tool

In the “External tool configuration”, you can now define the settings for the Class Climate LTI integration.

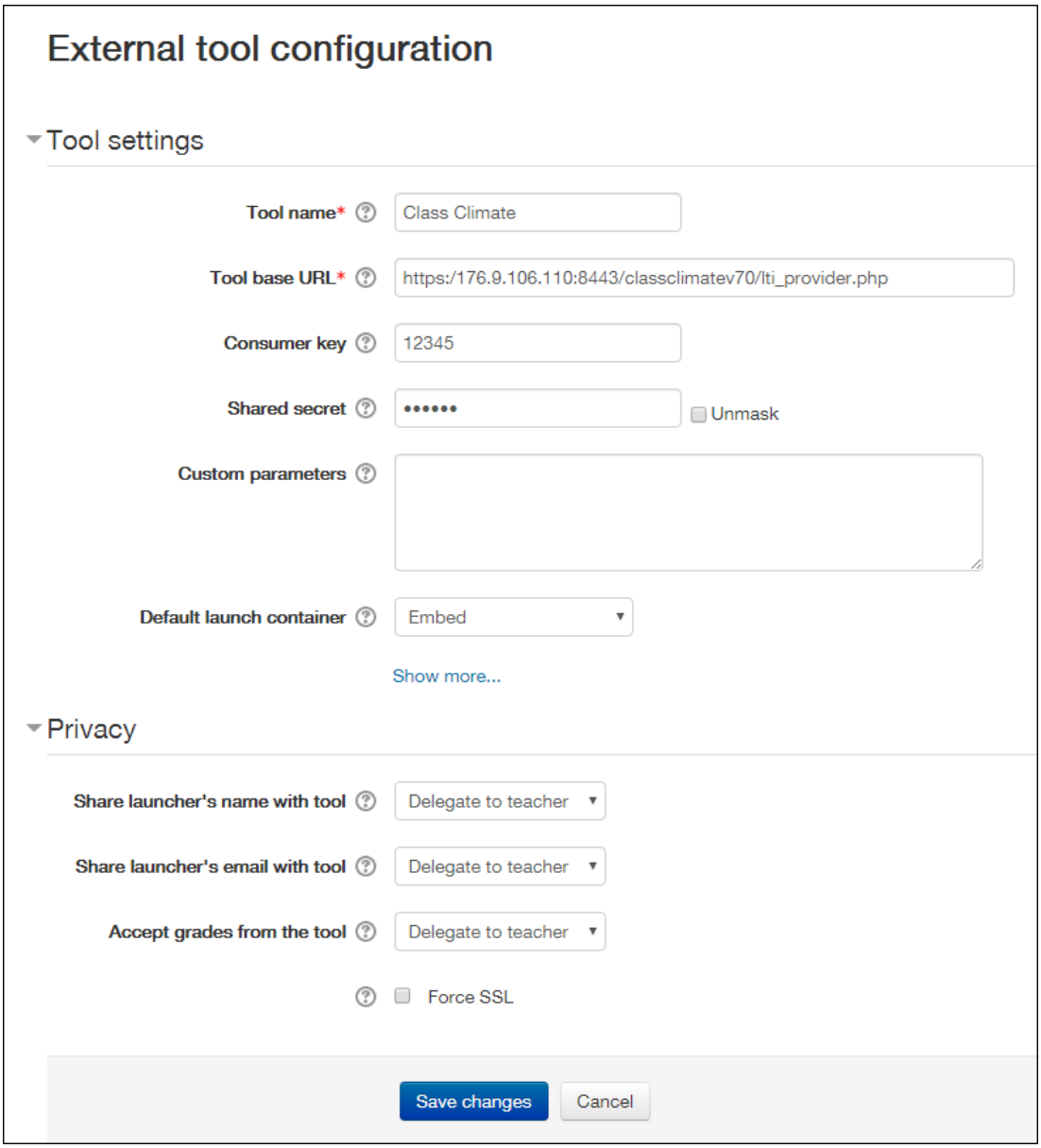

Figure 35: External tool configuration

Enter the following information:

- Tool Name: e.g “Class Climate Surveys”
- Tool base URL: Customer specific URL to the Class Climate server, e.g. https://<hostname>/classclimate/customer/lti/lti_provider.php
- Consumer Key: “12345”
- Shared Secret: e.g. “secret”, defined in the Class Climate menu “Interfaces and Plug-ins / LTI® Interface” (see above chapter 2.1)

- In the “Custom Parameters” box you may add one or more of the parameters described in the section LMS Custom Parameters.
- Default launch container: “Embed”

Click [Save Changes] to return to the prior view.

Enter an Activity name and select the external tool type you have just created from the drop-down list. Click [Save and return to course].

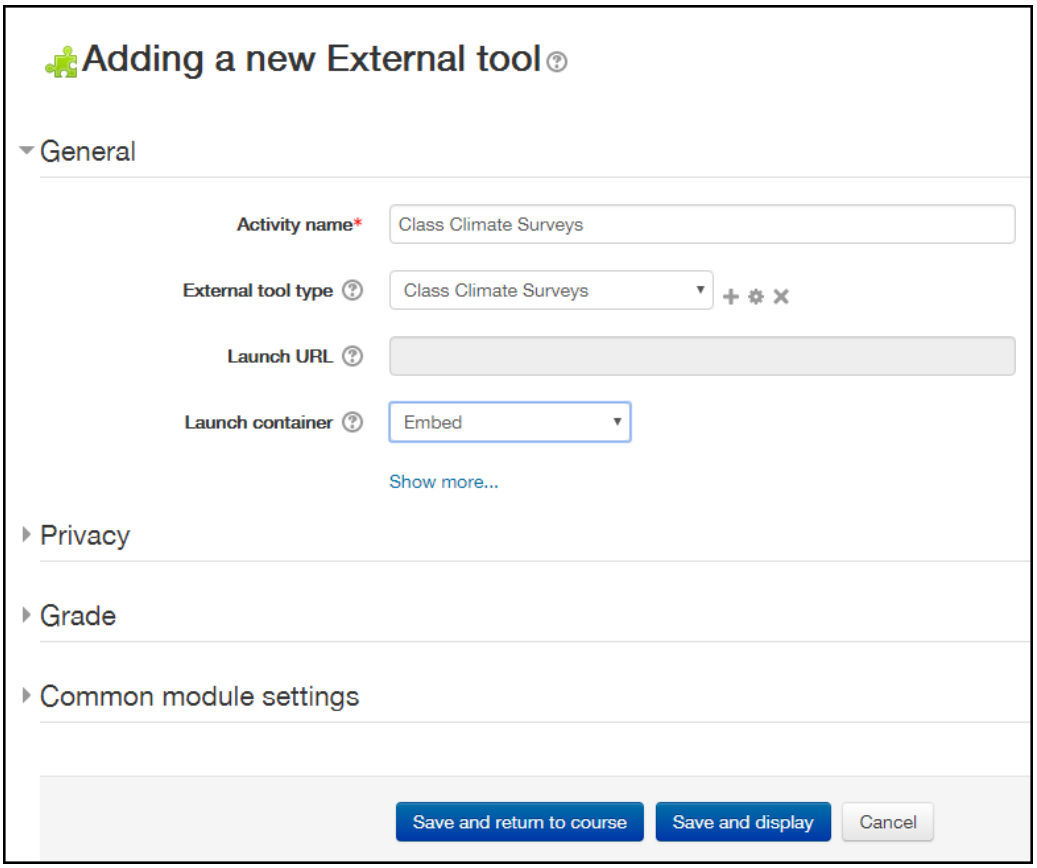

Figure 36: Add external tool

3.2.2. Adding the LTI tool to a course

If you want to add the tool to a course, open the course, open “Add an activity…” and select “External tool”.

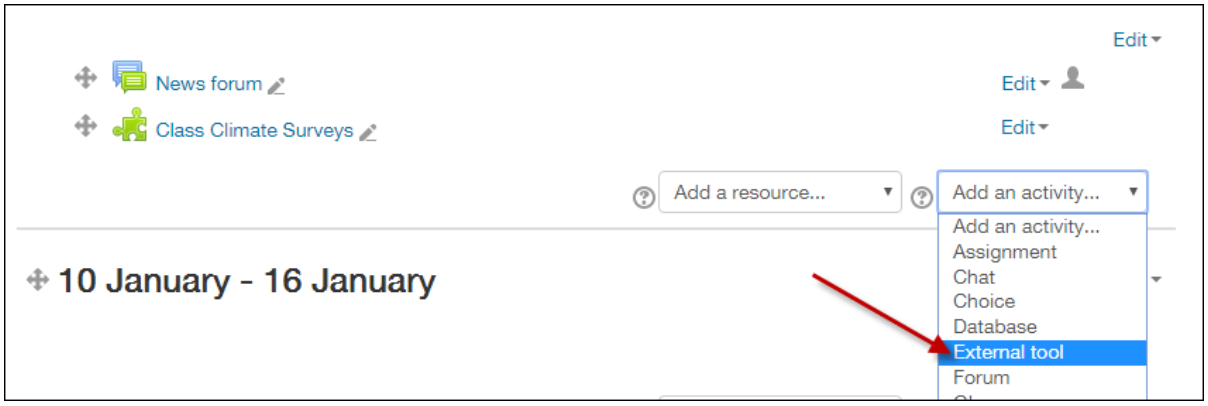

Figure 37: Add activity to course

Enter an Activity Name and select your Class Climate Surveys tool type from the Global tool types section.

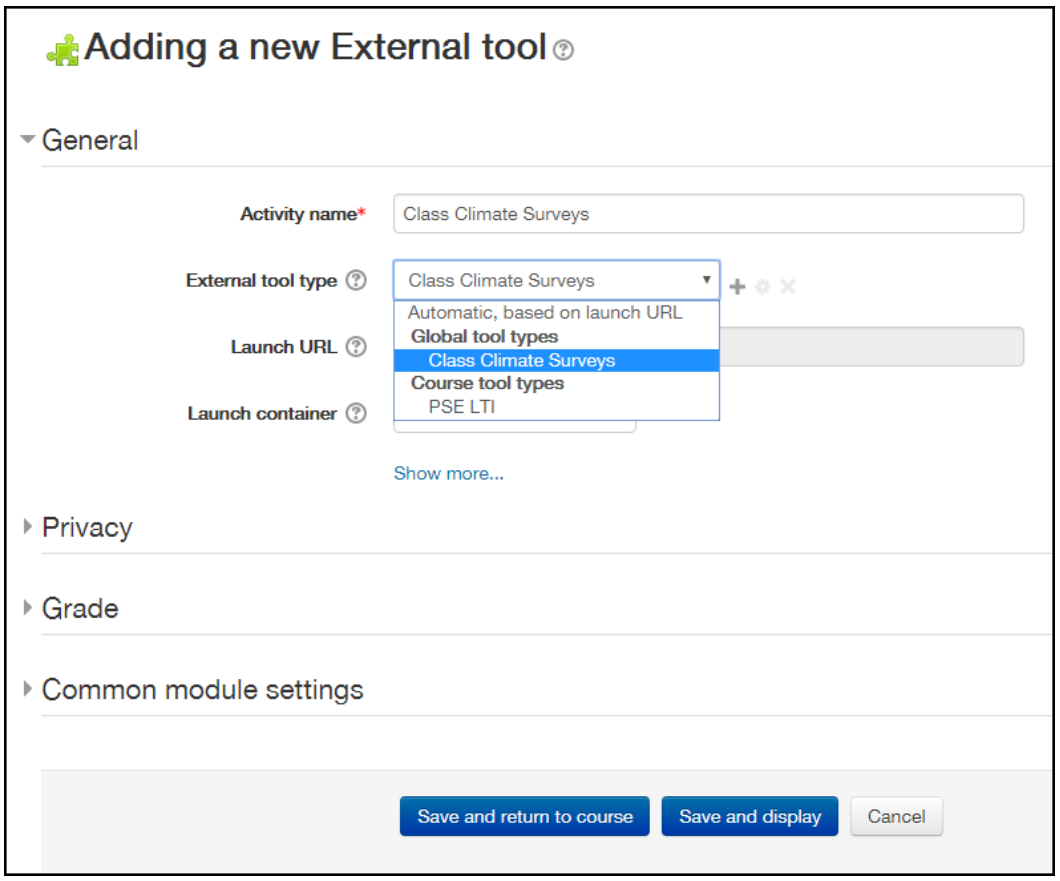

Figure 38: Select external tool type

Click [Save and return to course]. The activity will now be displayed at the top of the page.

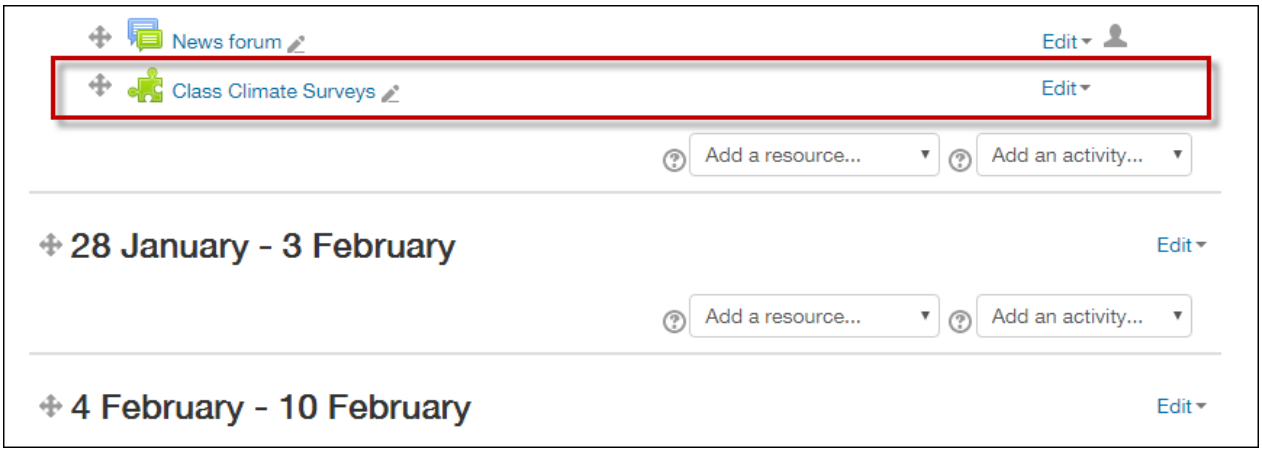

Figure 39: Activity added to course

3.2.3. Moodle Sample Screenshots

Class Climate LTI Integration in Moodle:

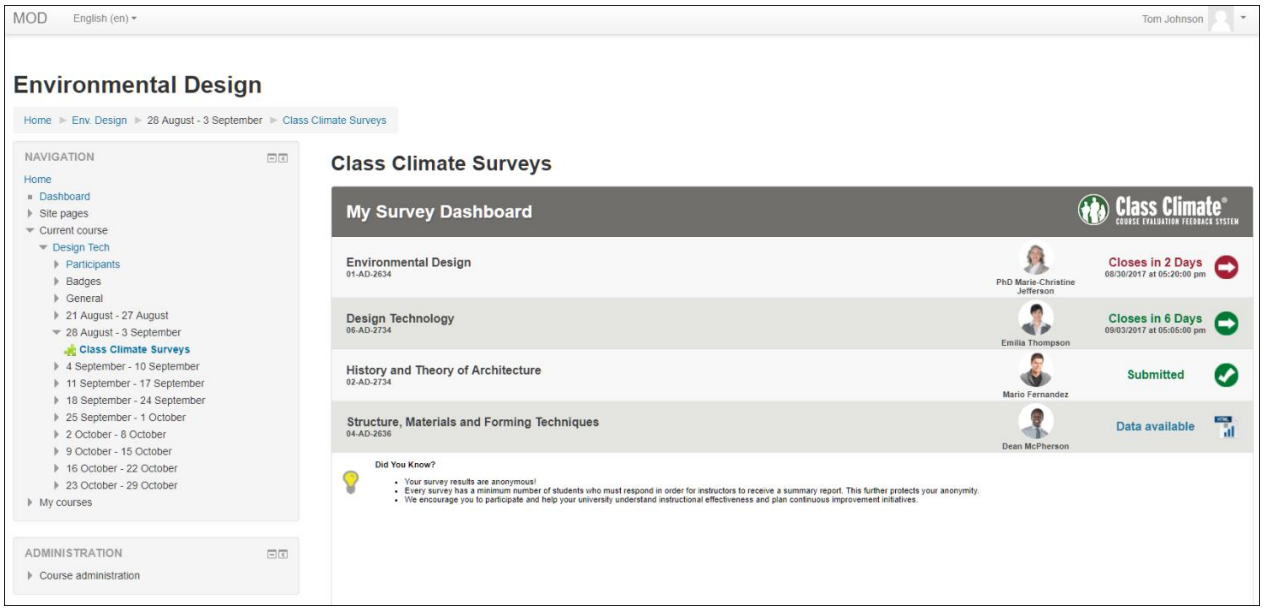

Figure 40: Student View

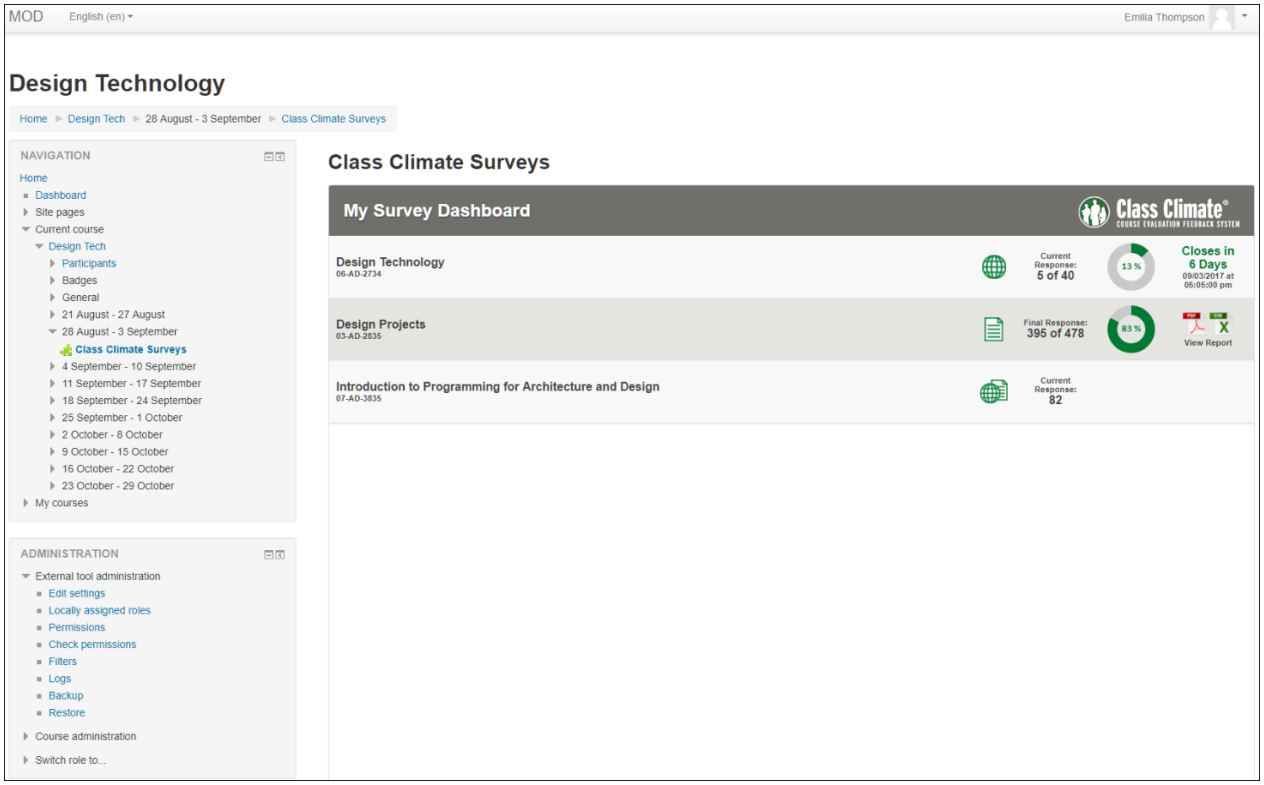

Figure 41: Lecturer View

3.3. BrightSpace® by D2L

In this section the installation steps are described which are to be conducted after logging in as a BrightSpace® by D2L Administrator. It is possible to setup the LTI link in three ways:

- Link (Widget with Link to open the dashboard in a new tab)
- Quick link (Widget with content inside the widget)
- Course level navigation

In this manual, we describe the quick link.

3.3.1. Edit Course

Select the “Admin Tools” icon from the top navigation bar to access the course administration panel.

Open the section “External Learning Tools”.

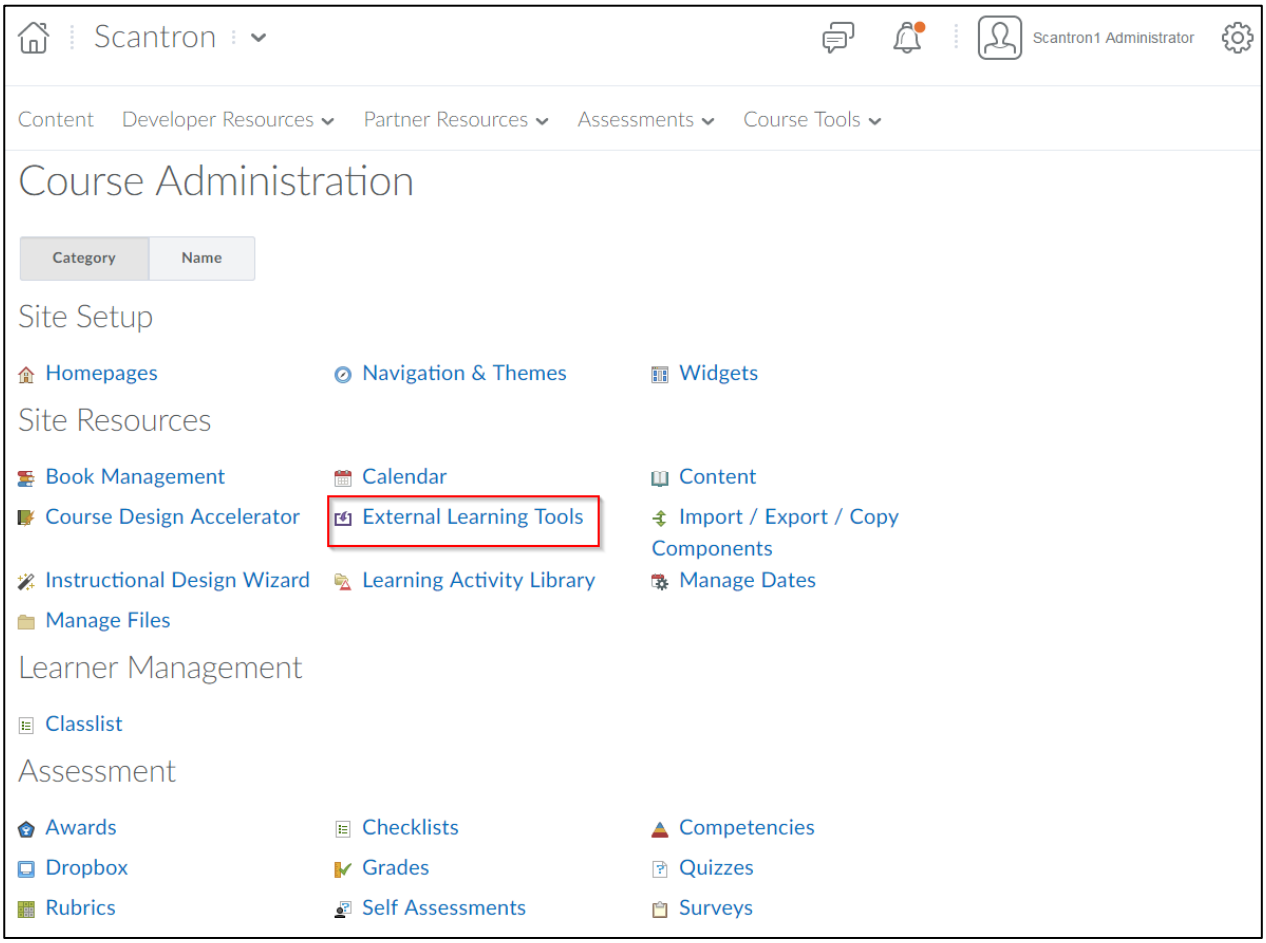

Figure 42: Edit Course

By default, the “Manage External Learning Tool Links” panel should be open.

If not, open the menu by clicking the corresponding link in the left navigation panel.

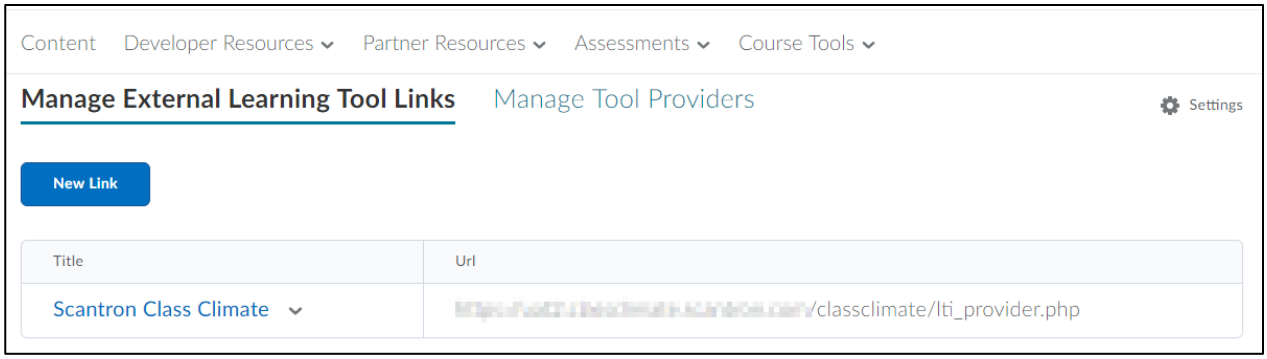

Figure 43: "Manage External Tool Links" Navigation Button

Click "New Link" to configure a new external learning tool.

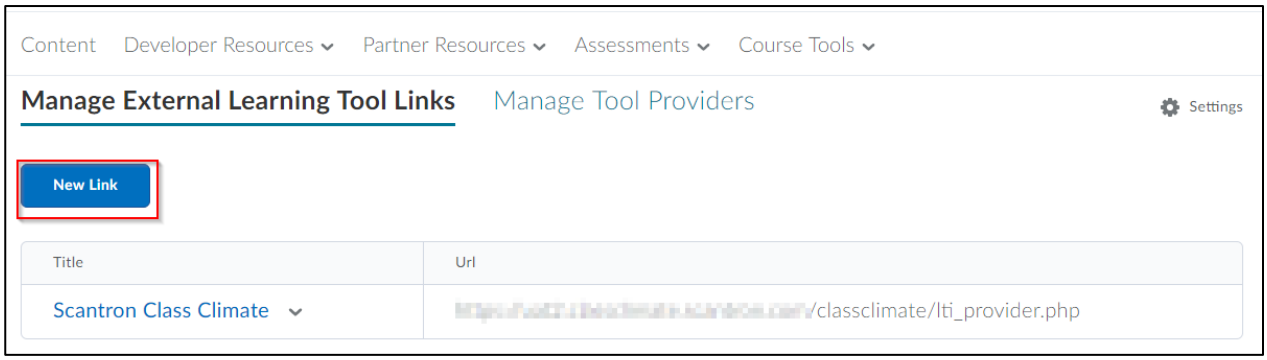

Figure 44: Add new External Learning Tool

3.3.2. Configure the Link

The first section contains the mandatory properties of the tool:

- The title
- The URL used to access Class Climate

The description is optional, although it is advised to fill it in. The visibility option should be checked so that users can access it.

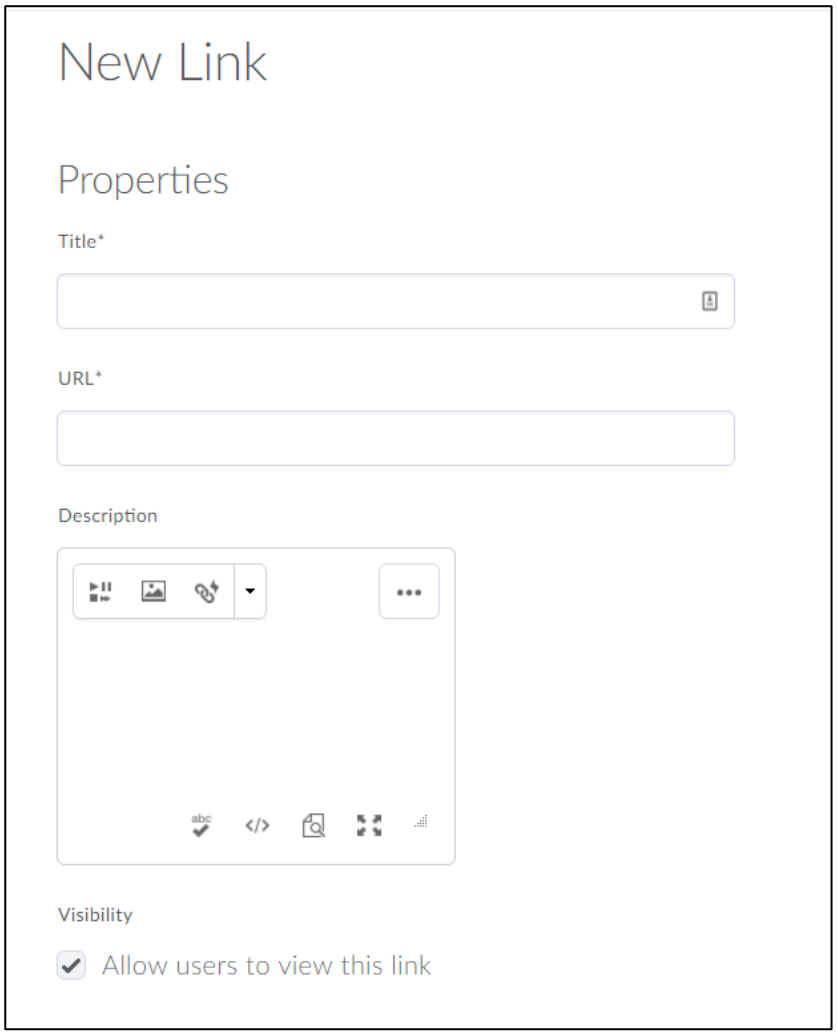

Figure 45: Properties

Please note, that the URL be the IP or hostname of your Class Climate system and must be a HTTPS URL without any parameters similar to this:

https://<hostname>/classclimate/customer/lti/lti_provider.php

In the section “Key / Secret” check the option “Sign messages with key/secret with” and select the "Link key/secret" option.

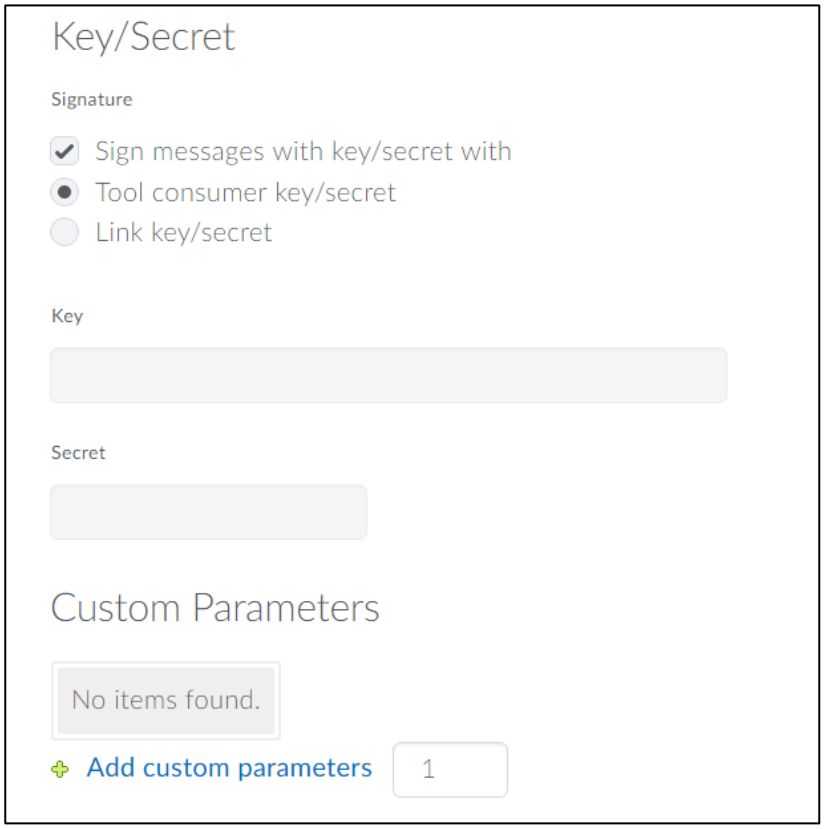

Figure 46: Entering the key and secret

The default "Key" is “12345”. In the entry box for the secret, enter the secret you have defined in the Class Climate menu “Interfaces and Plug-ins / LTI® Interface” (see above chapter 2.1).

In the “Custom Parameters” box you may add one or more of the parameters described in the section LMS Custom Parameters.

Please make sure to check the option “Send user email to tool provider” in the “Security Settings” section as shown below.

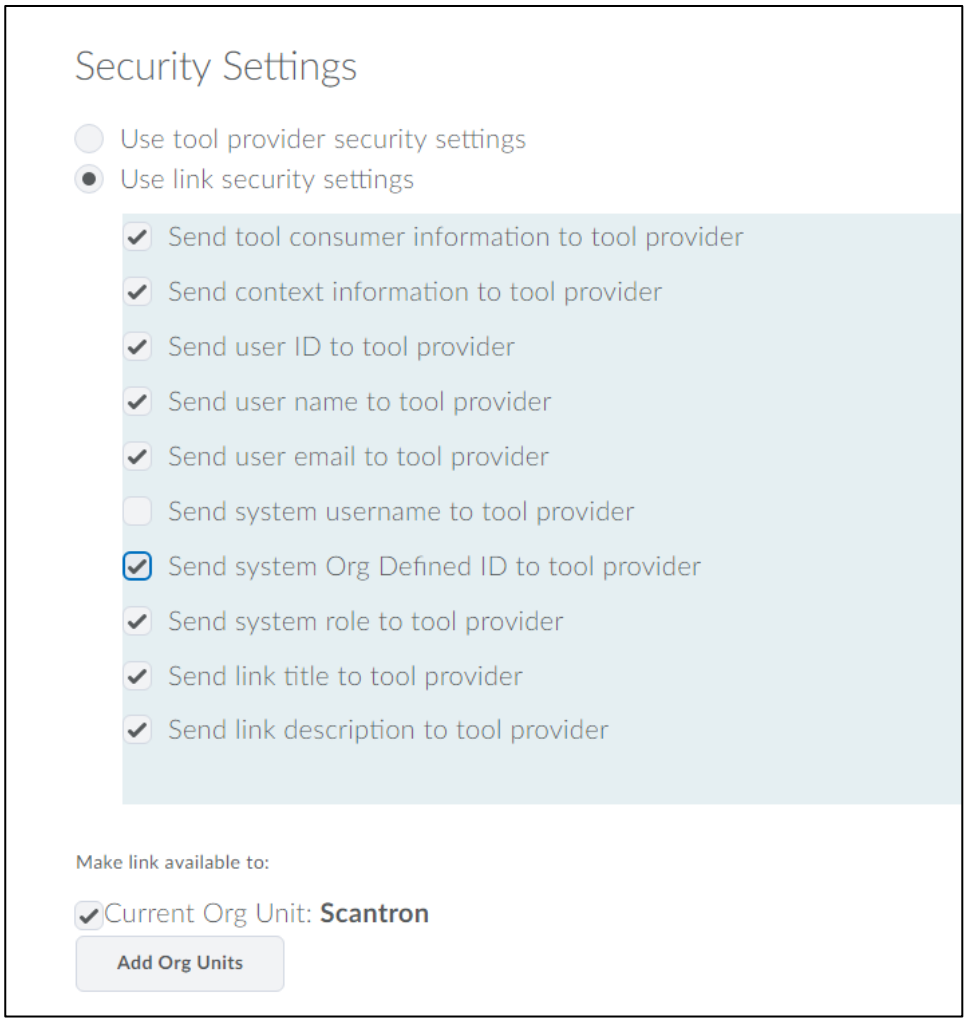

Figure 47: Security Settings

Once all settings are done, press [Save] and proceed to create a widget for the students.

3.3.3. Create a Widget

To create a widget, please proceed as follows:

- Click “Select a course…” and select the desired course from the drop-down menu.

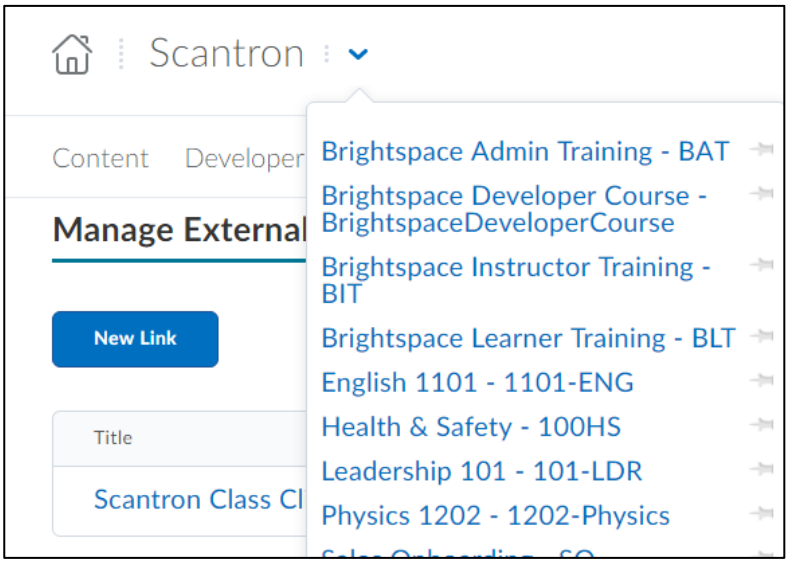

Figure 48: Select Course

Select the “Edit Course” menu from the top navigation bar. Then select “Widgets”.

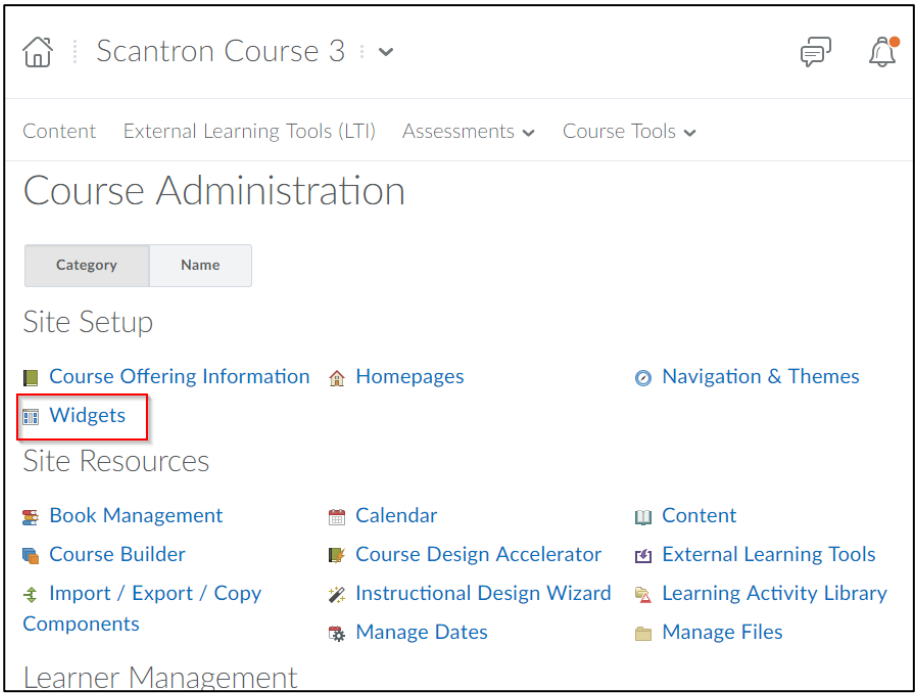

Figure 49: Widgets

Select “Create Widget” under “Manage Widgets”

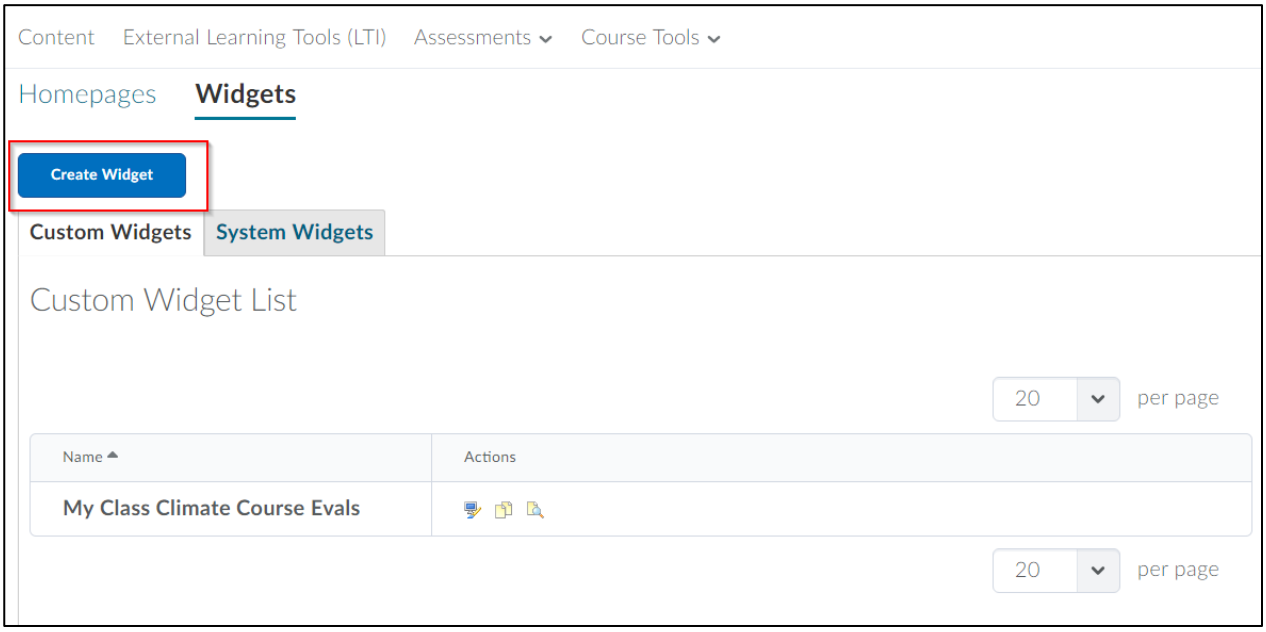

Figure 50: New Widget

Use the appearing tabbed panel to configure the new widget, following the steps described below.

In the “Properties” tab, enter a name in the mandatory “Name” field and optionally a description in the description field.

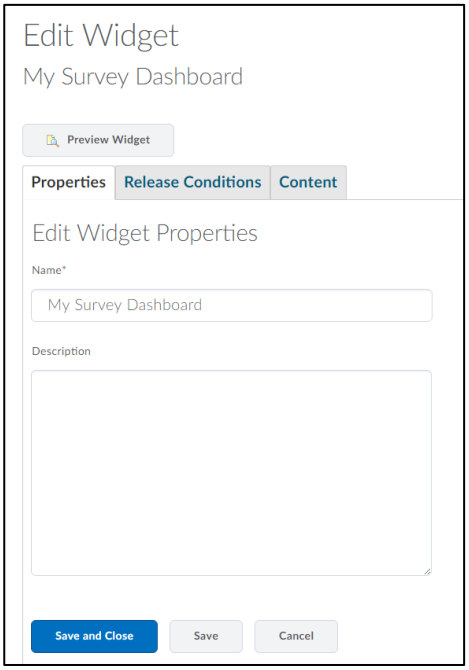

Figure 51: New Widget Properties

Open the “Content” tab where the content can be entered with the help of a WYSIWYG type editor.

Add a quick link with the editor's “Insert Quicklink” button.

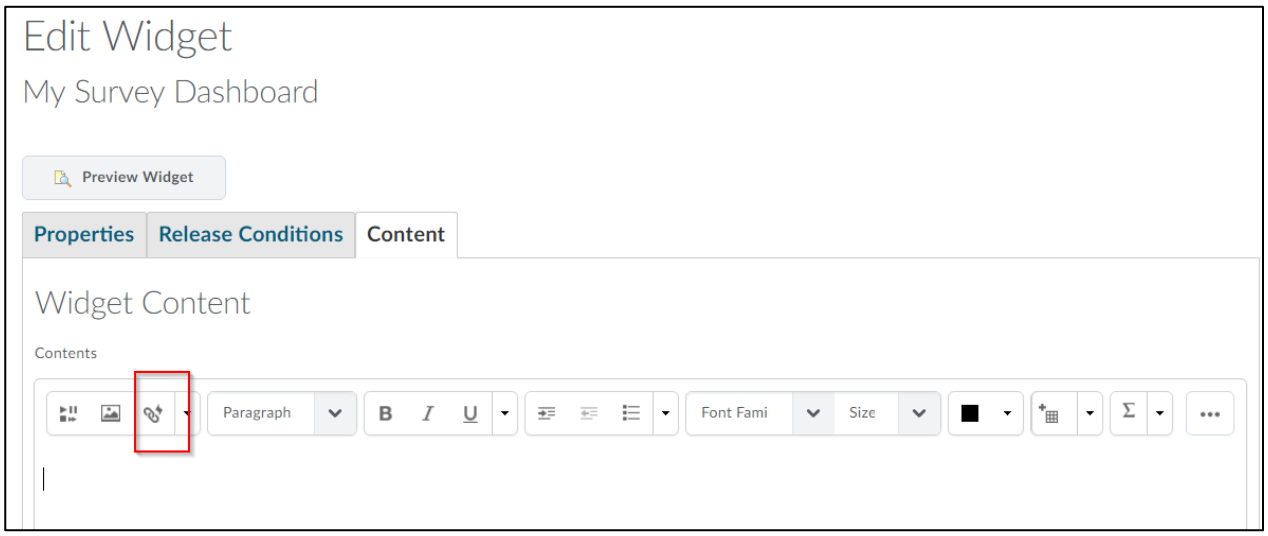

Figure 52: Insert Quick Link

In the pop-up dialog, select the category “External Learning Tool”

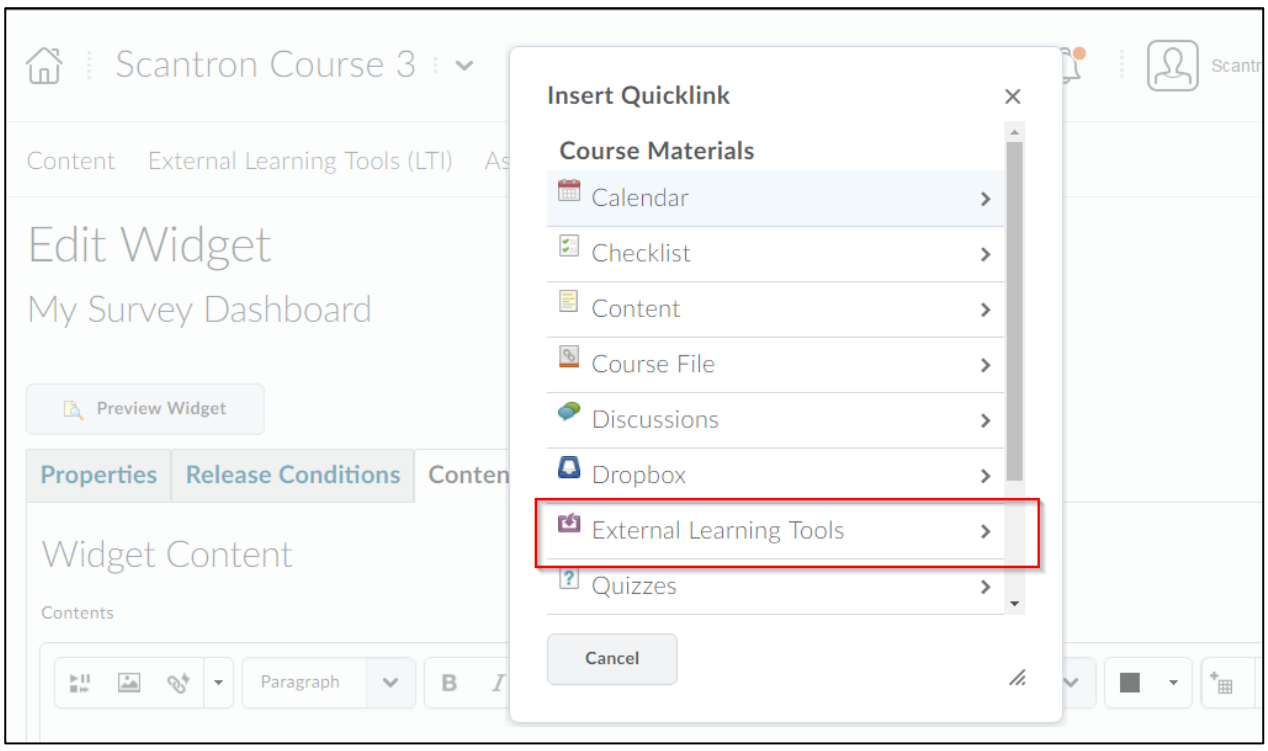

Figure 53: Insert Quicklink – Step 1

Select the tool added previously.

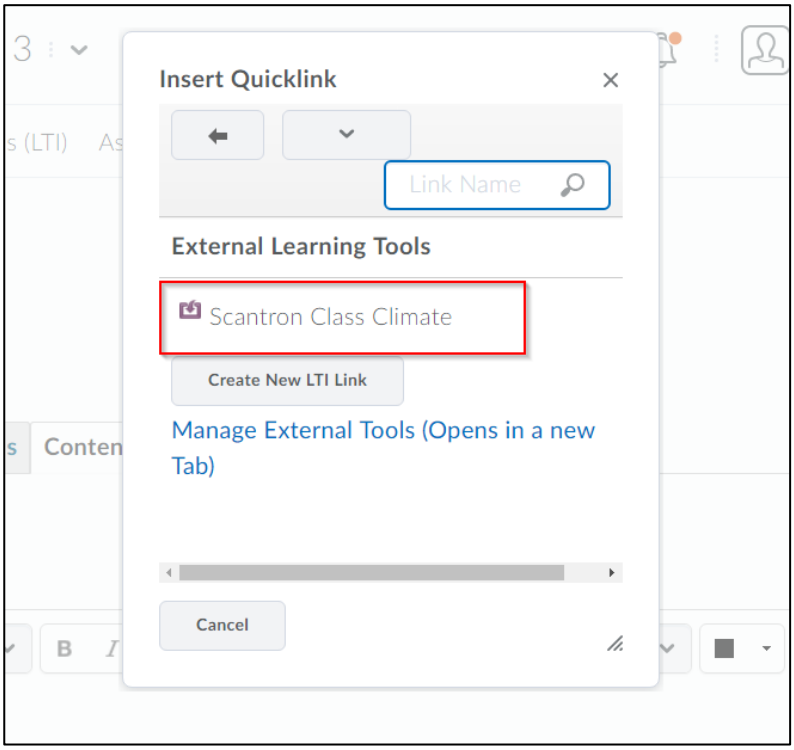

Figure 54: Insert Quicklink – Step 2

After having inserted the link, click the “Edit HTML Source” button at the bottom of the editor.

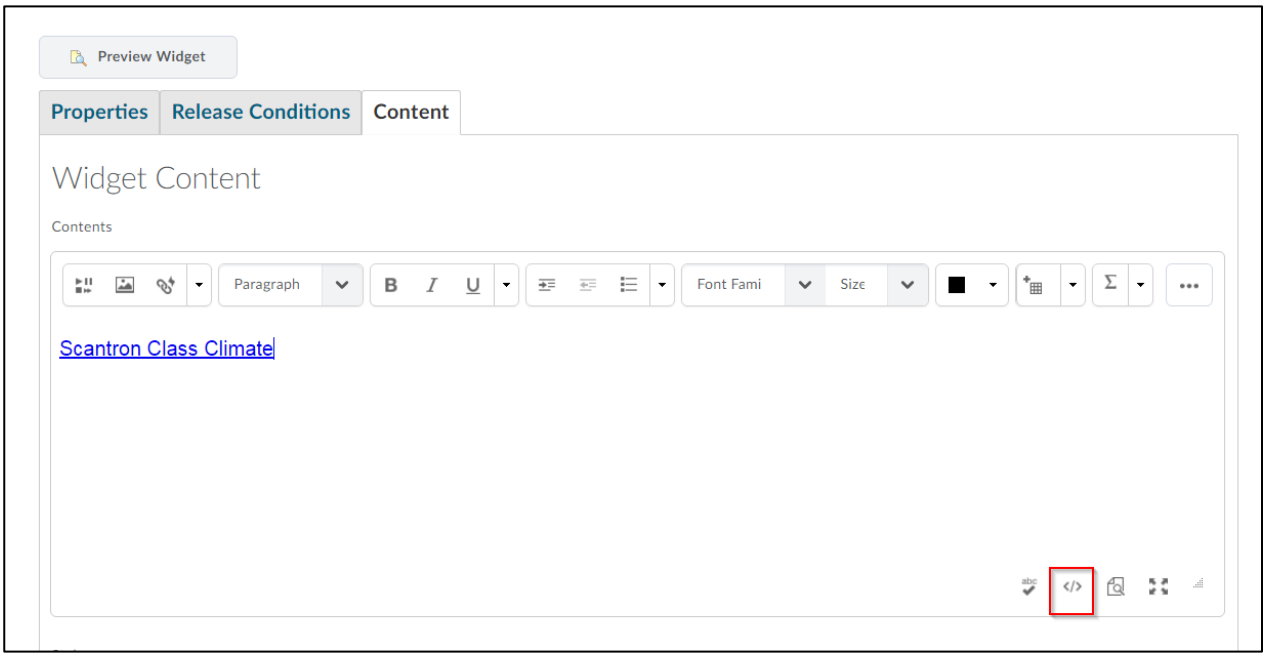

Figure 55: Edit HTML Source

This will bring up another window with the HTML content of the widget that looks something similar (in plain text):

* <a href="/d2l/common/dialogs/quickLink/quickLink.d2l?ou={orgUnitId}&type=lti&*

*amp;rCode=PNDevServe-3906&srcou=6756" target="_self">anything *

Copy the string between the quotation marks after "href=" part of the content (bold):

* <a href="**/d2l/common/dialogs/quickLink/quickLink.d2l?ou={orgUnitId}&type=lti&***

***amp;rCode=PNDevServe-3906&srcou=6756**" target="_self">anything *

Replace the whole content with:

<iframe src="" width="100%" style="height: 50vh;"></iframe>

Insert the previously copied string between the quotation marks after “src=”, so the resulting content looks similar to:

*<iframe src="**/d2l/common/dialogs/quickLink/quickLink.d2l?ou={orgUnitId}&type=lti&rCode=PNDevServe-3906&srcou=6756**" width="100%" style="height: 50vh;"></iframe>*

Click “Update” after finishing the content editing.

The editor's content will change from a link to a box (the widget will not work at this point). Click “Save” to save the new widget.

3.3.4. Add a Widget to the Course Homepage

To add a widget to the homepage of a course, proceed as follows:

Select the course from the top menu bar “Select a Course…”, and click on the “Edit this homepage” button.

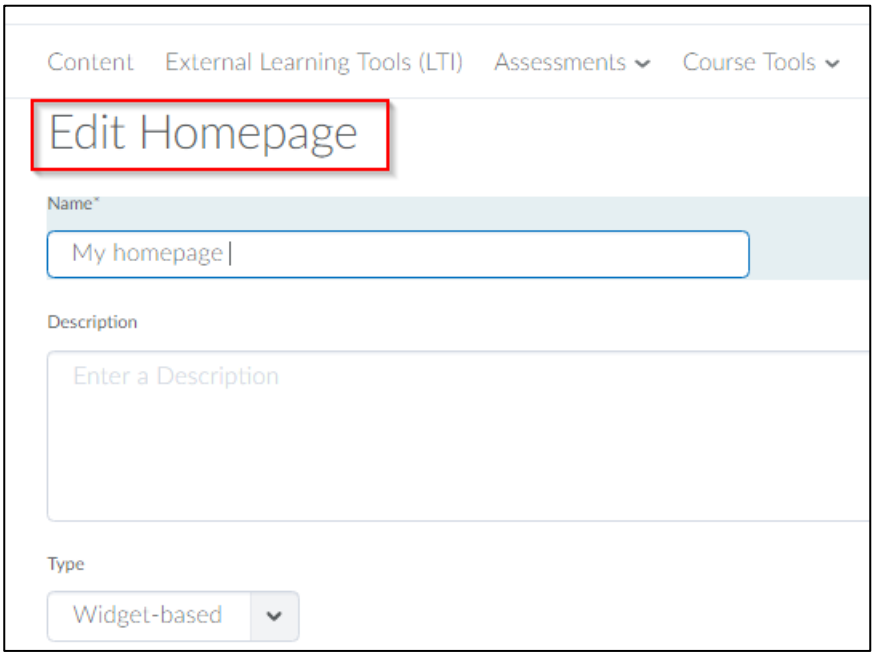

Figure 56: Edit Homepage

At the bottom of the page, click [Add Widgets] to add a widget to the homepage.

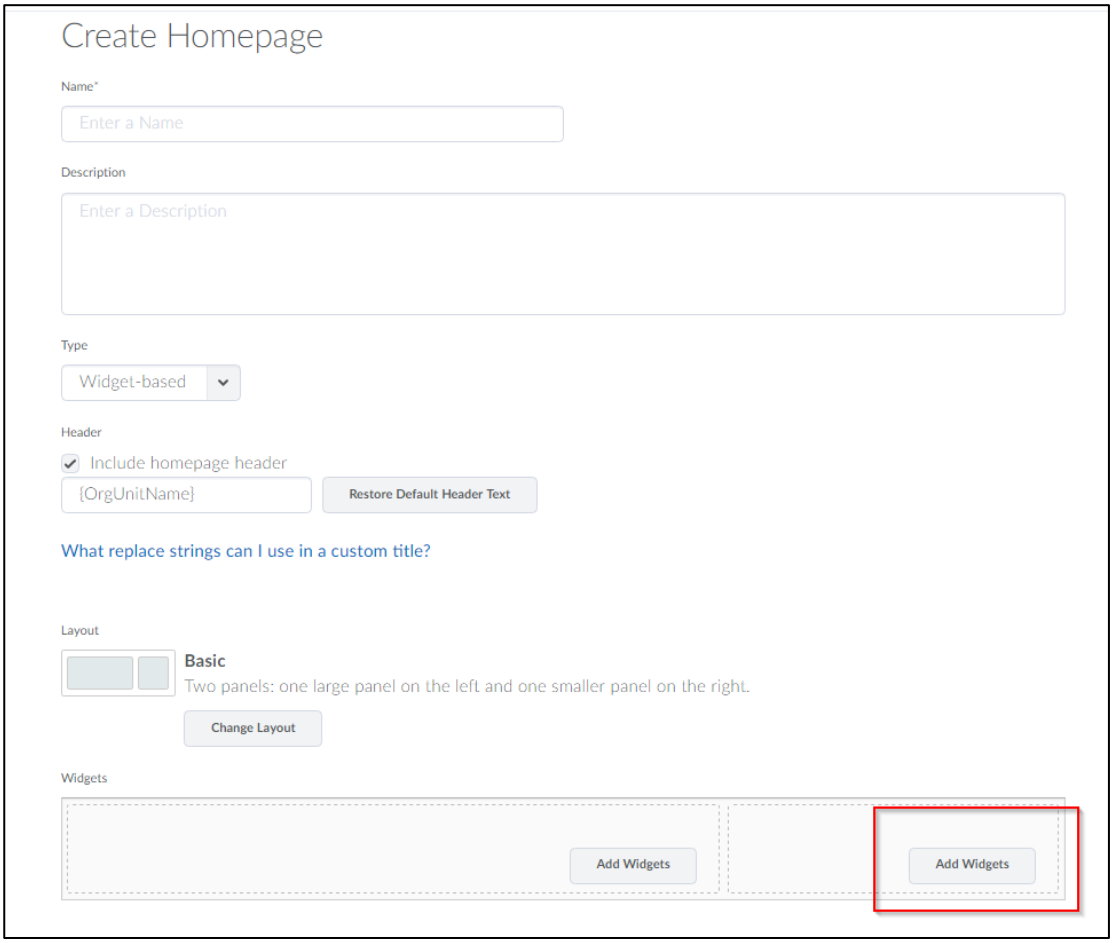

Figure 57: Add a Widget to the Homepage

Select the widget from the dialog, and then click “Add”.

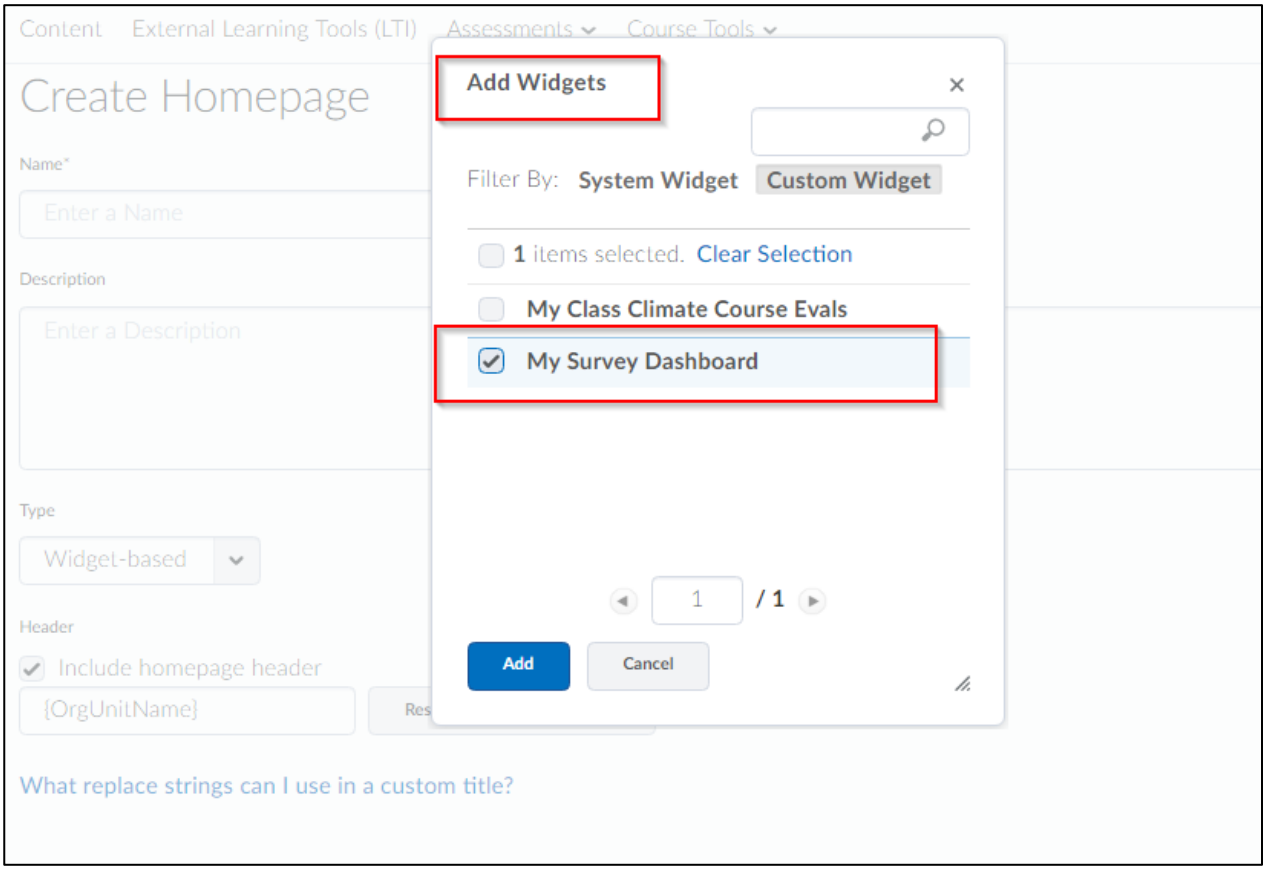

Figure 58: Select the Widget

Save your changes.

A box labelled “Scantron Class Climate” will now appear on your course homepage.

Please note that it is recommended to use the homepage of the system and not a particular course page for the widget.

3.3.5. Brightspace Sample Screenshots

Class Climate LTI Integration in Brightspace:

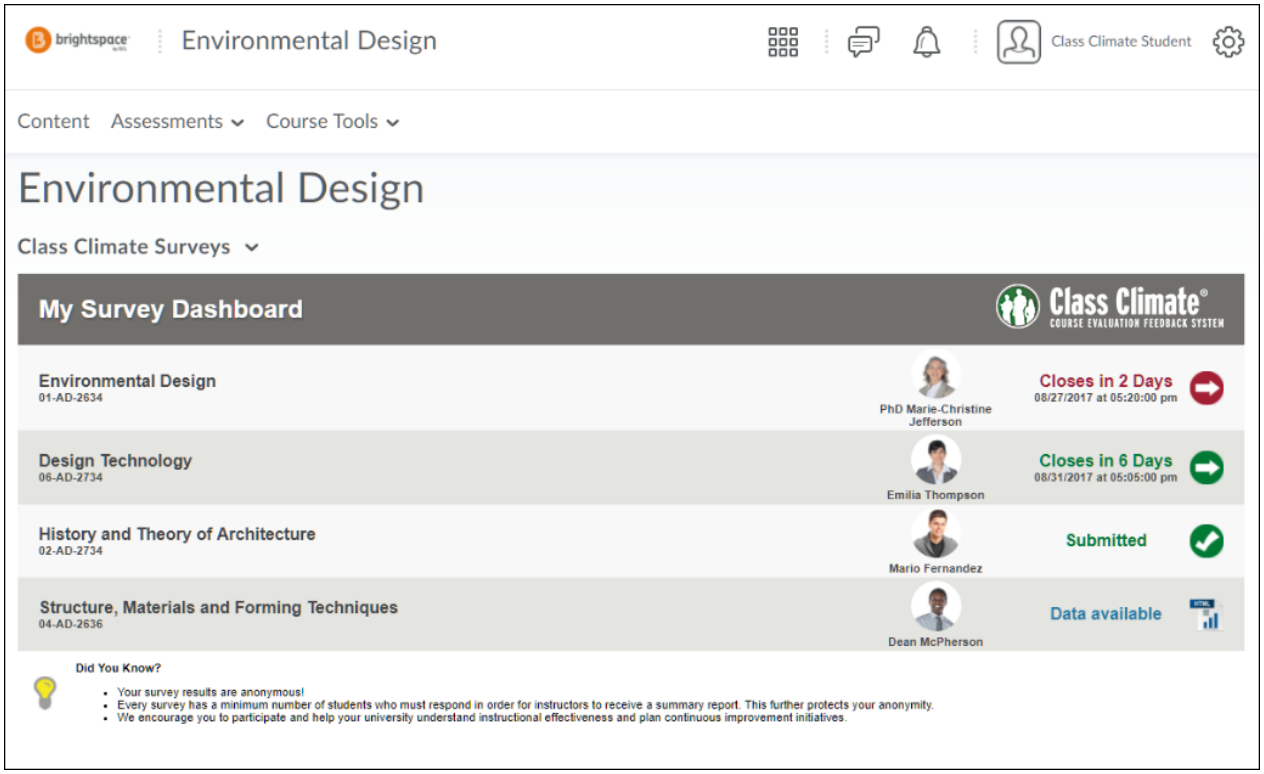

Figure 59: Student View

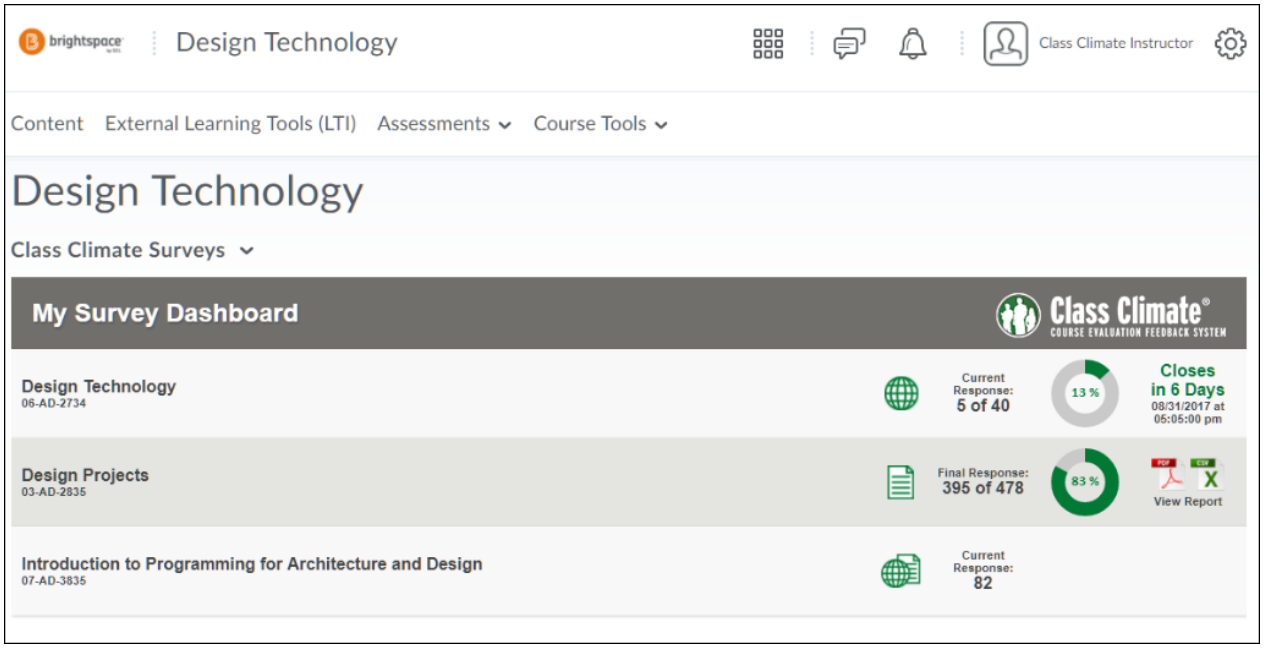

Figure 60: Lecturer View

3.4. Canvas

To connect Class Climate and Canvas via LTI, a new app has to be added and configured in Canvas. In the following chapters, the relevant steps are described.

You have two ways to add the app in Canvas.

- **Manual Entry**. LTI link will need to be added manually to each course as a module.
- **XML**. LTI link will be added as a course navigation.

3.4.1. Adding a new App

Log in to the Canvas administrator interface.

Select “Admin” from the left side panel, then select one of the managed accounts.

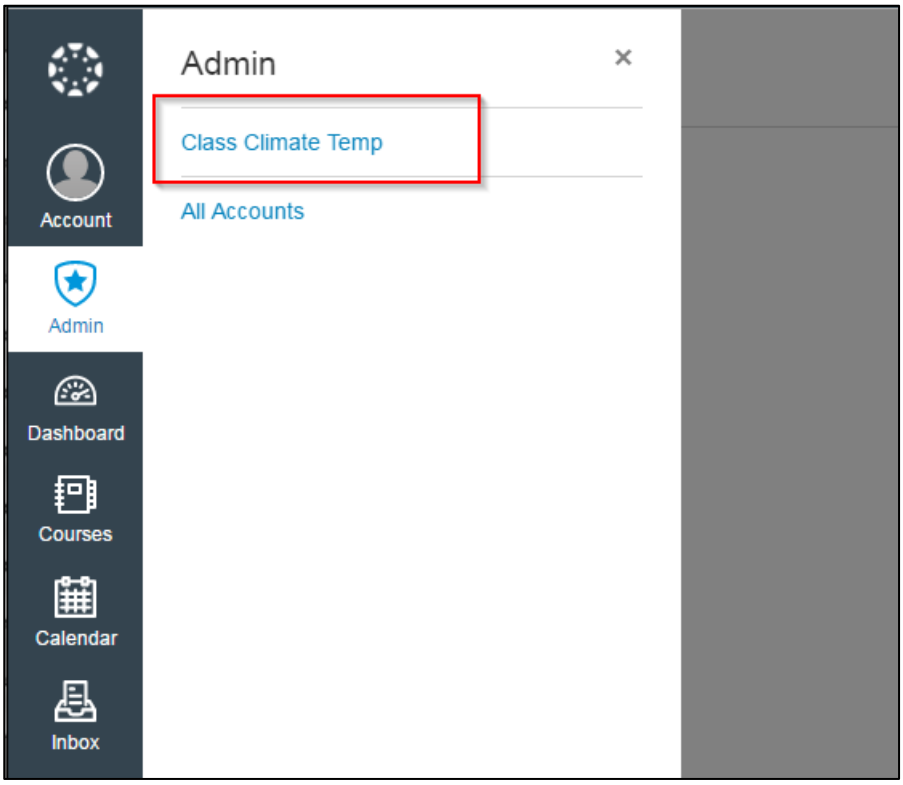

Figure 61: Administrator’s Managed Accounts

Go to menu entry “Settings” and then select the tab “Apps”. Click the button “View App Configurations” to reach the management section of external tools.

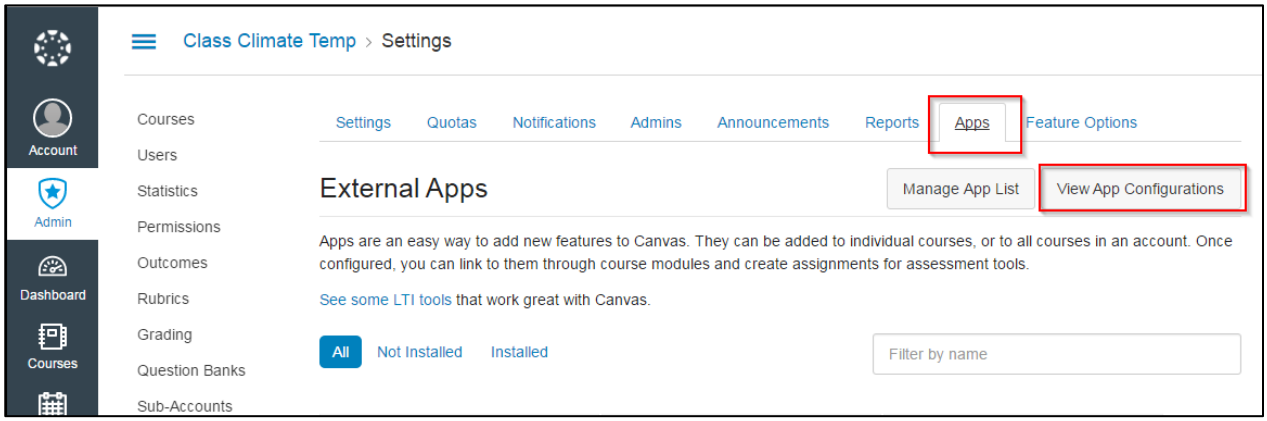

Figure 62: External Apps

Click the button “Add App” to add a new External App.

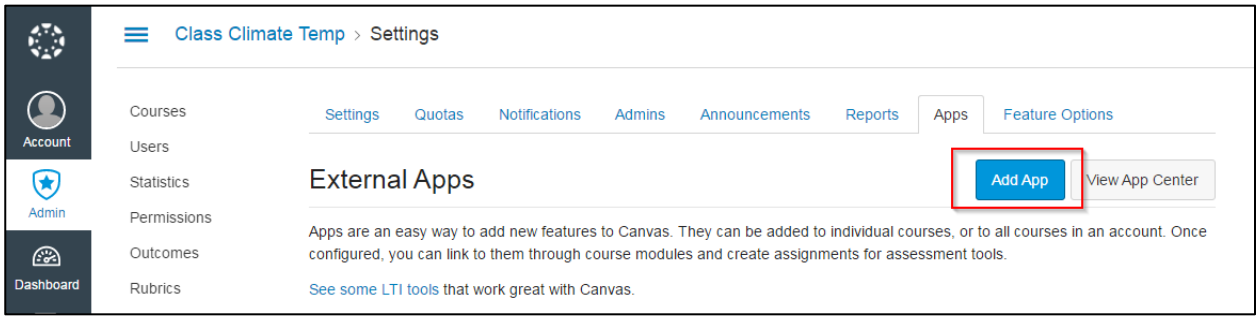

Figure 63: Adding new App

3.4.2. Editing External App

Apps are an easy way to add new features to Canvas. They can be added to individual courses, or to all courses in an account. Once configured, you can link to them through course modules and create assignments for assessment tools.

This section contains the mandatory properties of the tool:

- Name: e.g “Class Climate Surveys”
- Consumer Key: “12345”
- Shared Secret: e.g. “secret”, defined in the Class Climate menu “Interfaces and Plug-ins / LTI® Interface” (see above chapter 2.1)
- Configuration Type: Select “Manual Entry”
- URL: Customer specific URL to the Class Climate server, e.g. https://<host-name>/classclimate/customer/lti/lti_provider.php
- Domain: n/a
- Privacy: Select “Email only”
- Custom Fields: You may add one or more of the parameters described in the section LMS Custom Parameters.
- Description: n/a

Please note, that the URL should be the IP or hostname of your Class Climate system and must be a HTTPS URL without any parameters similar to this:

https://<hostname>/classclimate/customer/lti/lti_provider.php

Once the settings are done, press “Submit”.

The Canvas connector (LTI tool) is now configured and can be added to the course pages.

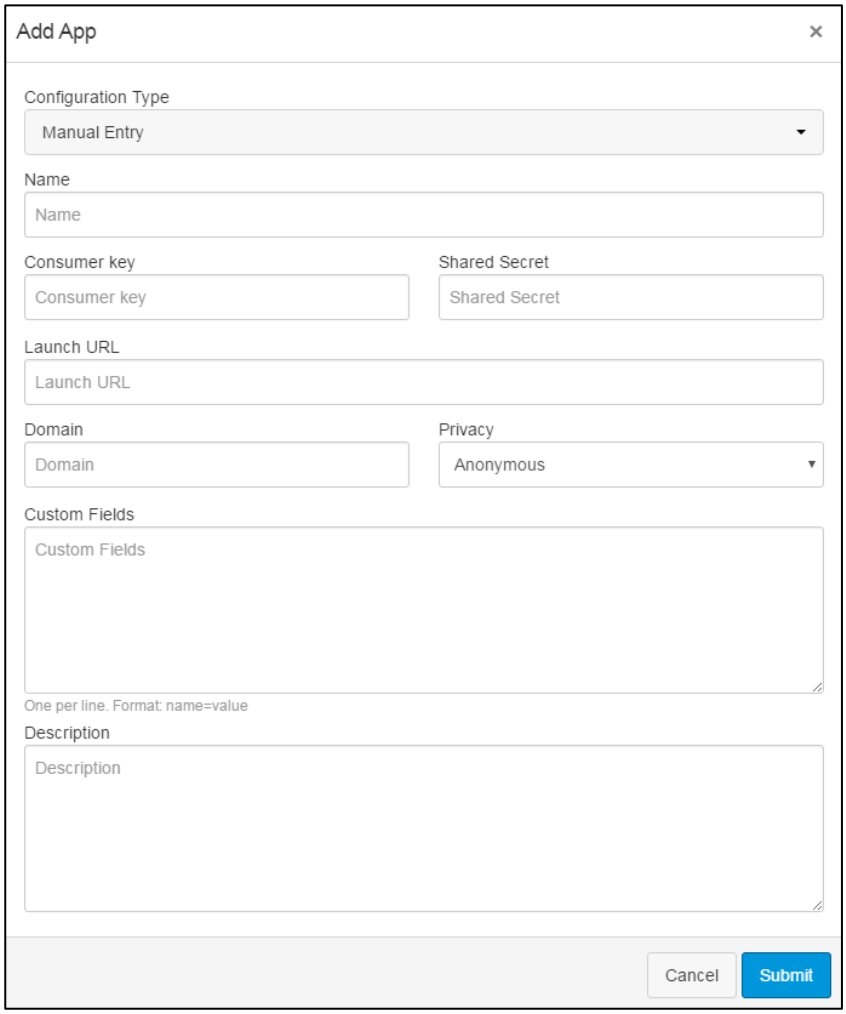

Figure 64: Editing External Tool

3.4.3. Adding an App to a course

Scantron Class Climate Learning Tool can be added to any courses by clicking on the name of the course.

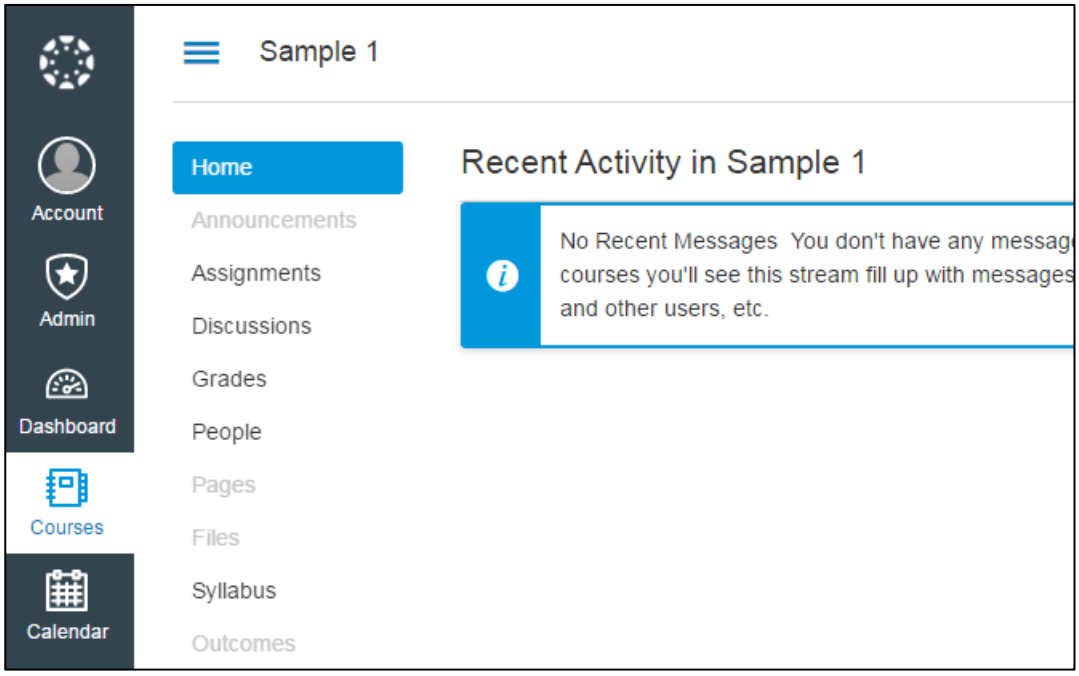

Figure 65: Selecting course for adding external tool

After selecting the course, click on “Modules” on the side bar. Here you can add the external tool to one of the Modules.

Select “Add Content” in the “Module Options” dropdown menu at top right.

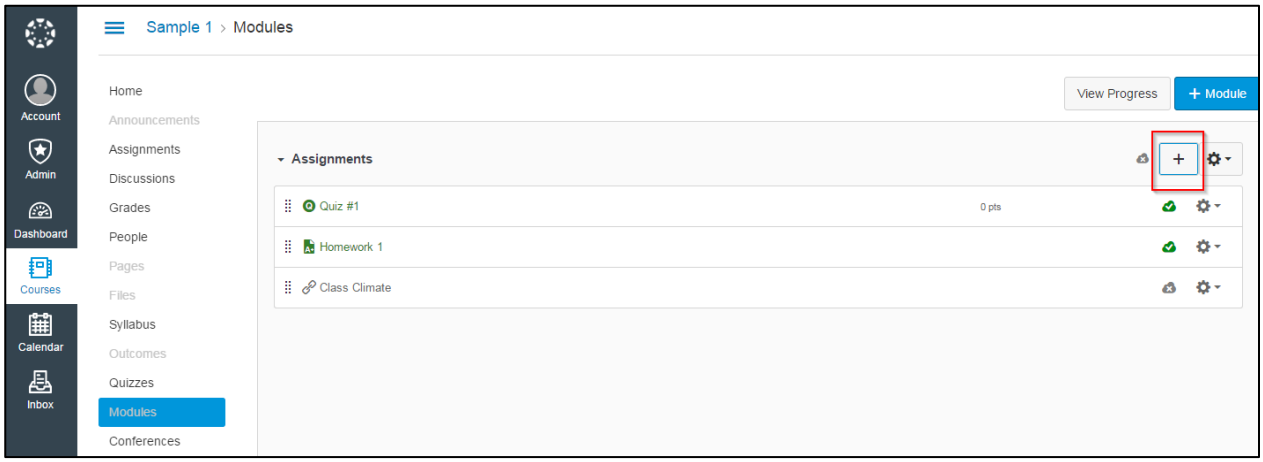

Figure 66: Adding content to a module

Choose “External Tool” from the list.

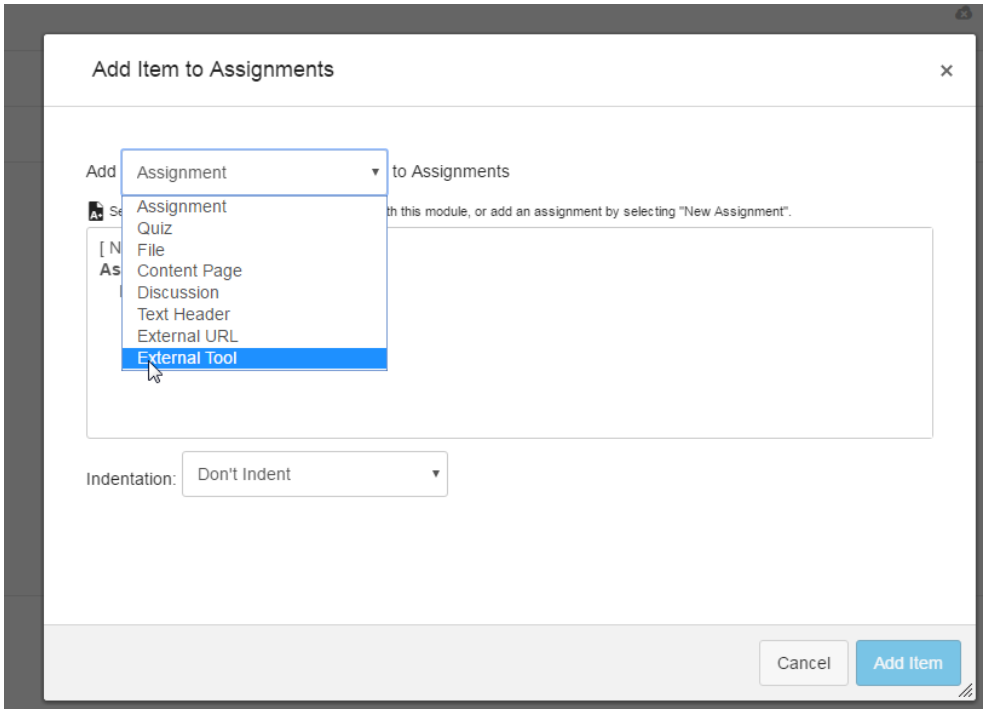

Figure 67: Selecting External Tool to add

Select “Class Climate Surveys” and click on button “Add Item” to finish the process and to add the chosen external tool to your course/module.

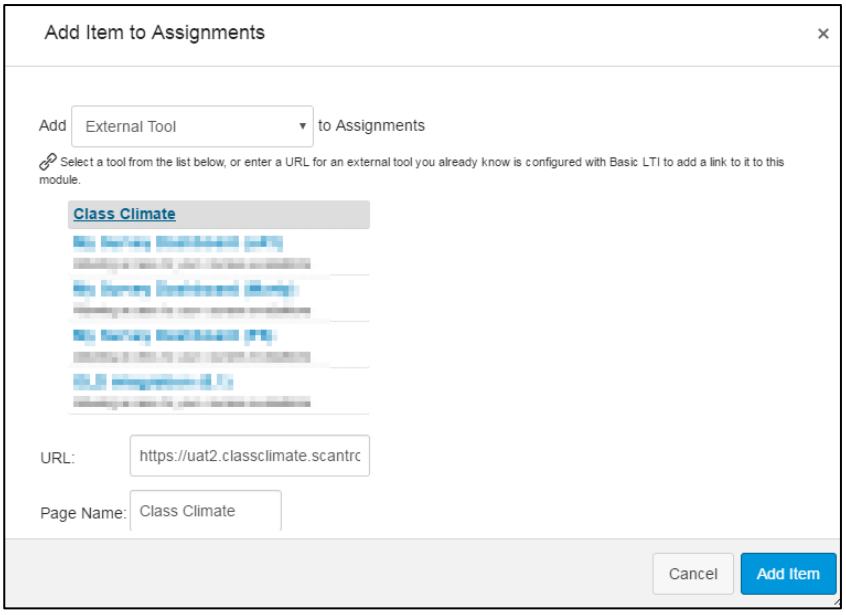

Figure 68: Adding Scantron Class Climate tool

3.4.4. Configuring the tool as a course level left-hand menu item

With the aid of a configuration XML file, the tool can be used as a course level left menu navigation item, bypassing the need for more segmented usage of the tool.

A different setup method is required for this functionality.

By following the steps described in chapter 4.1, the dialog for adding the external tool can be accessed.

By selecting **Paste XML** from the Configuration Type dropdown list, the dialog will be accommodated to accept the XML configuration. The LTI tool can be added by clicking the **Submit** button.

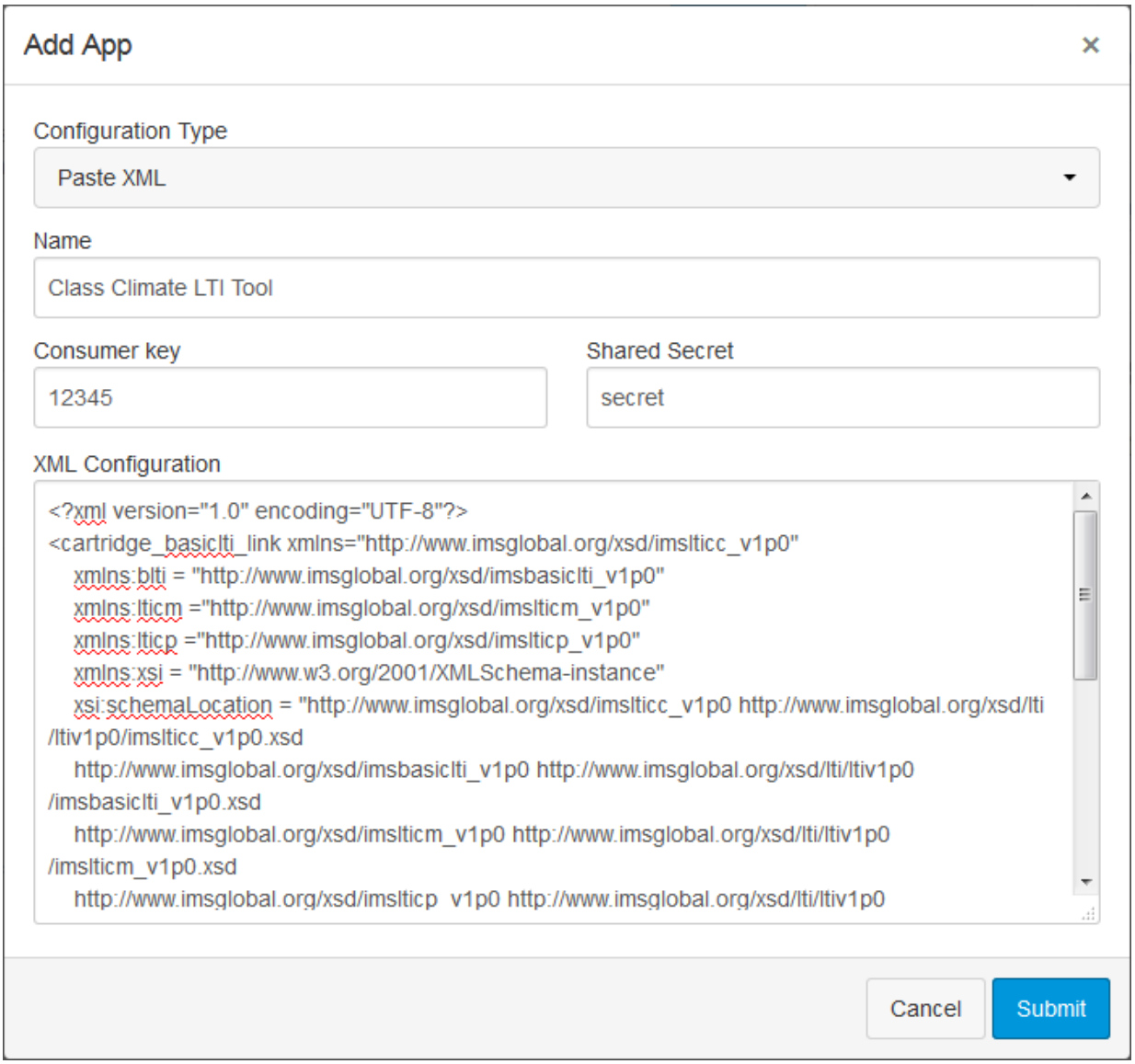

Figure 69: Adding the Class Climate LTI tool with course level navigation

Below is the sample XML definition you can use to create the course navigation link.

```
<?xml version="1.0" encoding="UTF-8"?>
<cartridge_basiclti_link xmlns="http://www.imsglobal.org/xsd/imslticc_v1p0"
    xmlns:blti = "http://www.imsglobal.org/xsd/imsbasiclti_v1p0"
    xmlns:lticm ="http://www.imsglobal.org/xsd/imslticm_v1p0"
    xmlns:lticp ="http://www.imsglobal.org/xsd/imslticp_v1p0"
    xmlns:xsi = "http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation = "http://www.imsglobal.org/xsd/imslticc_v1p0 http://www.imsglobal.org/xsd/lti/ltiv1p0/imslticc_v1p0.xsd
    http://www.imsglobal.org/xsd/imsbasiclti_v1p0 http://www.imsglobal.org/xsd/lti/ltiv1p0/imsbasiclti_v1p0.xsd
    http://www.imsglobal.org/xsd/imslticm_v1p0 http://www.imsglobal.org/xsd/lti/ltiv1p0/imslticm_v1p0.xsd
    http://www.imsglobal.org/xsd/imslticp_v1p0 http://www.imsglobal.org/xsd/lti/ltiv1p0/imslticp_v1p0.xsd">
        <blti:launch_url>https://<hostname>/classclimate/customer/lti/lti_provider.php</blti:launch_url>
        <blti:title>Class Climate Survey Evaluation</blti:title>
        <blti:description>Allowing access to your courses evaluations</blti:description>
        <blti:extensions platform="canvas.instructure.com">
            <lticm:property name="privacy_level">public</lticm:property>
            <lticm:options name="course_navigation">
                <lticm:property name="enabled">true</lticm:property>
                <lticm:options name="custom_fields">
                    <lticm:property name="instructor_show_report">1</lticm:property>
                    <lticm:property name=" instructor_show_past_surveys_for_n_previous_periods">0</lticm:property>
                    <lticm:property name="learner_show_completed_surveys">1</lticm:property>
                    <lticm:property name="order_by_survey_close_date">1</lticm:property>
                    <lticm:property name="instructor_show_export">1</lticm:property>
                    <lticm:property name="learner_load_instructor_images">1</lticm:property>
                </lticm:options>
            </lticm:options>
        </blti:extensions>
</cartridge_basiclti_link>
```

The following values need to be modified in the XML to acheive the desired functionaliy:

- <blti:launch_url>https://<hostname>/classclimate/customer/lti/lti_provider.php</blti:launch_url >
  This field needs to contain the customer specific Class Climate URL
- <blti:title>**Class Climate Survey Evaluation**</blti:title>
  Title of the external tool
- <blti:description>**LTI tool**</blti:description>
  The description of the external tool. This can be modified after the tool has been added within the tool configuration.
- <lticm:options name="custom_fields"></lticm:options>

  Method used to import the desired custom parameters.

Other values should not be modified in the XML configuration to ensure the validity of this.

After the tool has been added with a valid configuration, an additional left menu entry will be available for the external tool.

3.4.5. Canvas Sample Screenshots

Class Climate LTI Integration in Canvas:

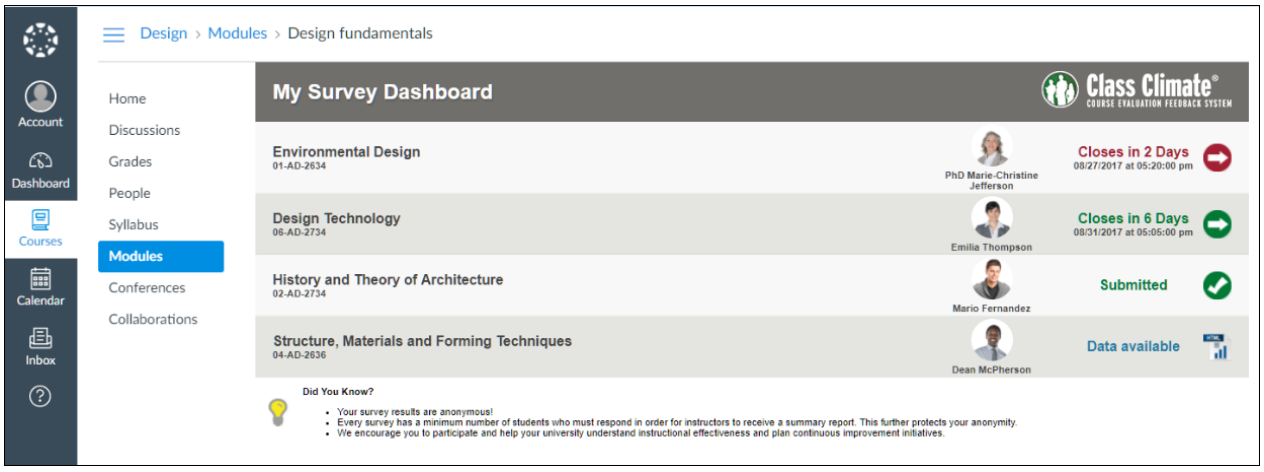

Figure 70: Student View

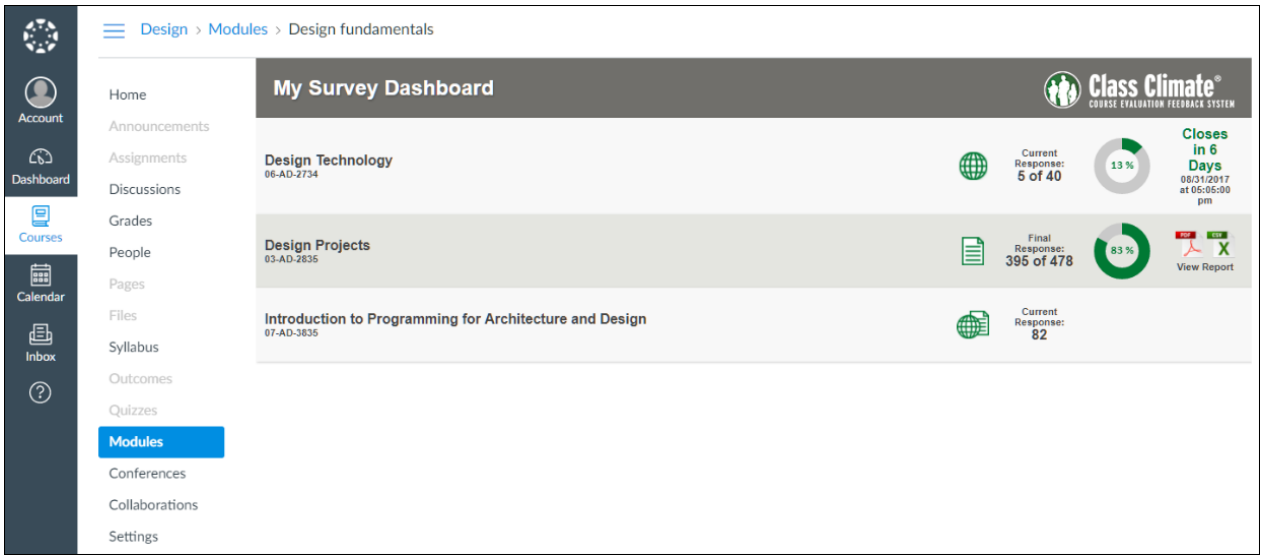

Figure 71: Lecturer View

4. Troubleshooting

In this section, we have listed some common errors and issues along with suggested solutions.

4.1. Insecure content

Using a SSL certification is a requirement for the LTI integration. Please contact your Server administrator for its implementation or configuration. If you are using a Load balancer, you will need to make sure the communication between the 2 systems remains encrypted with SSL within or outside your network.

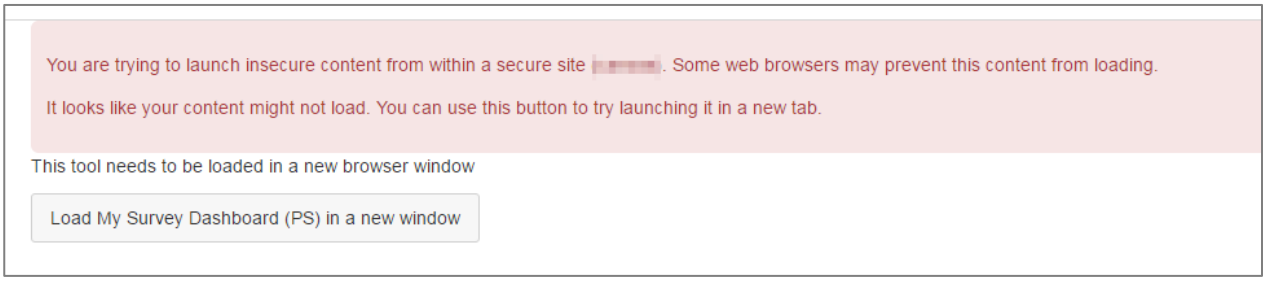

Figure 72: Insecure content

4.2. Invalid Request Error

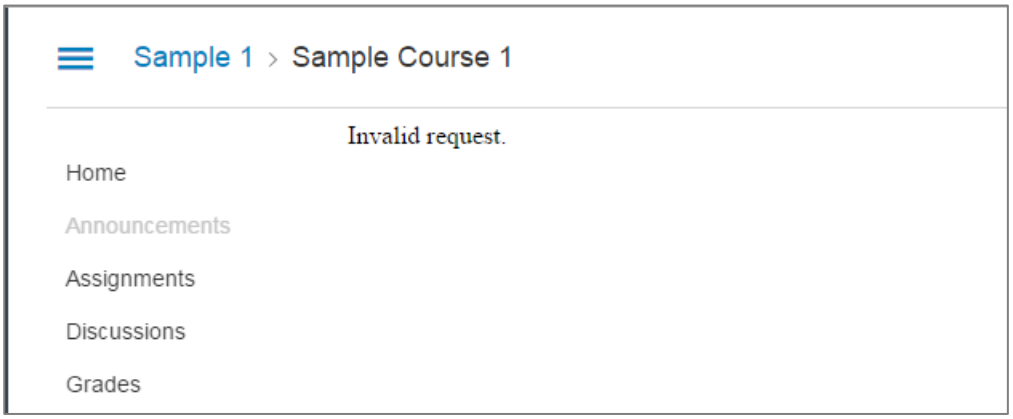

Figure 73: Invalid request

This type of error is typically displayed in case of mismatched information in the configuration of the integration or an issue with the communication across your network.

We suggest to review the value used for your shared secret on both systems.

Additionally, you might need to review the communication settings. If you are using a Load balancer, you will need to make sure the communication between the 2 systems remains encrypted with SSL within or outside your network.

4.3. User could not be determined

Figure 74: User could not be determined

This message is displayed when the system is not able to determine which information should be provided. Email addresses and LTI roles are used to identify which dashboard board to populate.

Please verify if the instructor or student account exist in Class Climate. Double check the email address and confirm the email value is not assigned to multiple accounts in Class Climate.

Please note: If an instructor or secondary instructor is stored in more than one Class Climate subunit with the same email address, then the survey data can only be displayed in the instructor's LMS account if you are using External IDs to connect the instructor accounts in Class Climate. If you do not use External IDs, then the data will not be displayed!

For more information, see chapter "Instructor Settings".

4.4. User Role undefined

This message is typically displayed when the LTI roles could not be determined. Ensure the account used is either a LMS instructor or Learner to display the desired dashboard.