



STEP

Solutions to
Tackle Energy Poverty

IT TOOLS FOR LEARNING MODULES

About the project

Solutions to Tackle Energy Poverty (STEP) is a project to develop a simple, innovative and replicable model of measures to address energy poverty.

The project covers some of the **countries** with the **highest rates of energy poverty in Europe**. These are Bulgaria, Cyprus, Czech Republic, Latvia, Lithuania, Poland, Portugal, Slovakia and the United Kingdom.



There are three specific objectives:

- To get consumer groups and frontline organisations, who advise people on a range of issues such as financial or health-related ones, to partner and deliver **advice** to energy poor consumers.
- To help energy poor consumers across the 9 countries save energy and improve their living standard. We will **advise consumers on more efficient energy consumption** and how this can help them save money and improve their health and well-being. We will carry out information campaigns, provide tips on **how to save energy**, demonstrate cost savings and help put in place low-cost energy efficiency measures.
- To disseminate **best practices and policy choices** that can alleviate energy poverty and promote their replication in other EU countries.

Project Title	STEP – Solutions to Tackle Energy Poverty
Grant Agreement	847080
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Deliverable Number	D3.4
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Author	Monika Kosińska-Pyter (FK)
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1. Technical development of the training tool

The main purpose of the activities under Work Package 3 is to prepare a training course which would be available and accessible with an easily sharable format both online and offline.

After consideration we decided to use and develop the online training modules using the Moodle platform.

This platform we believe is the most appropriate for the project's purposes. The choice for Moodle was based on:

- very low cost of the technical solution,
- the ability to adapt it to the needs of each partner,
- the possibility to use various file formats,
- knowledge of the tool by many training providers and by potential students.

In Moodle platform courses are also quite easy to develop – partners can add new modules, implement adaptations generated by market changes or by new regulations for example, e.g. energy efficiency labelling.

Project partners are also able to improve the e-learning courses in accordance with the students' needs and expectations.

Moodle was also a good choice in the pandemic context since it allows professionals working from home to access Moodle easily and manage the time they wish to allocate to the course while doing this at their own pace.

2. Platform

The e-learning was prepared on the Moodle platform and it includes (as in the Task 3.3 description) common and universal modules, modules requiring adaptation for local conditions as well as strictly local modules.

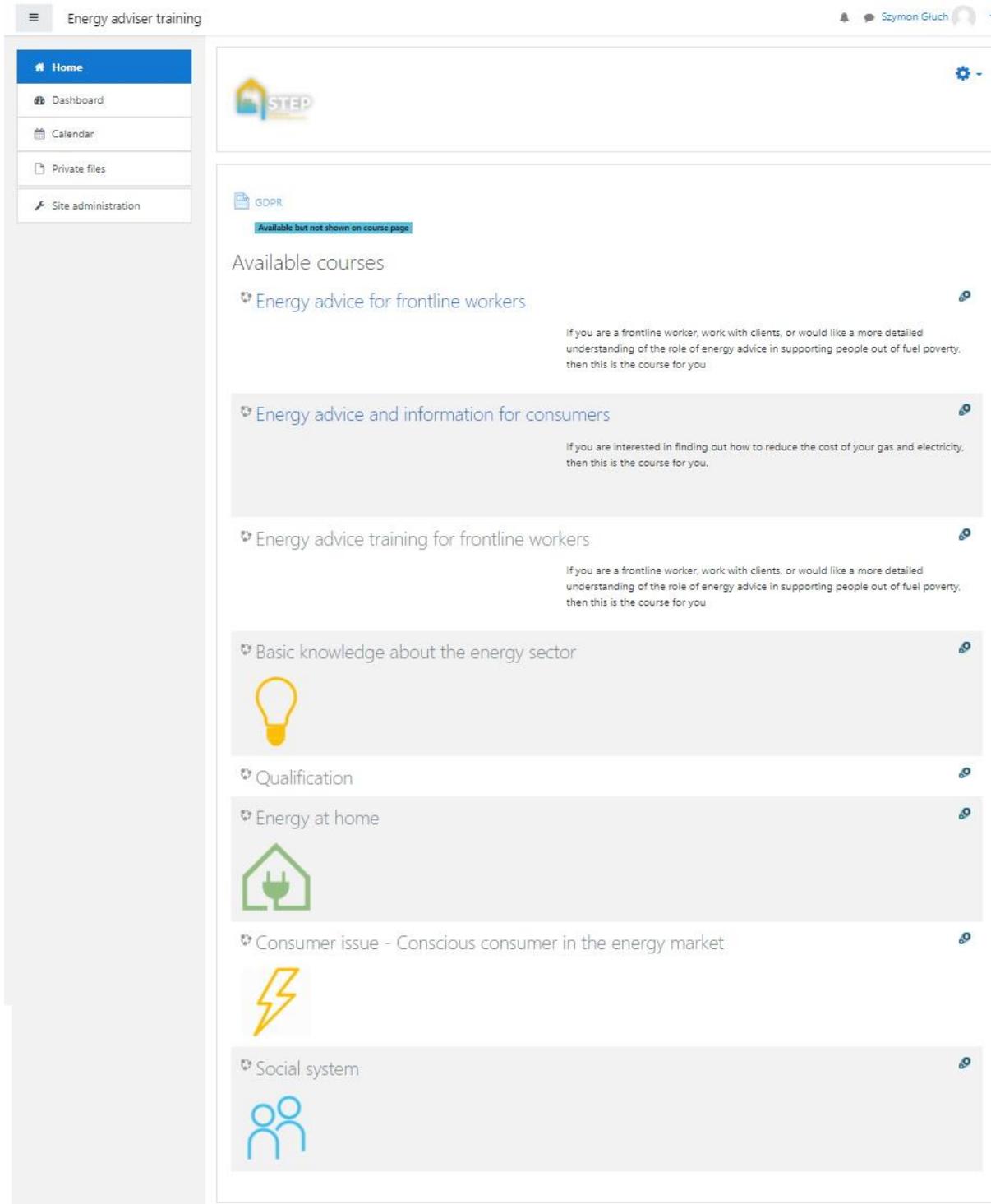
Based on the modules framework we divided the course into four thematic units:

- Basic knowledge on the energy sector
- Energy at home
- Consumer issues – The Conscious consumer in the energy market
- Social system

An extra unit on data privacy and reporting will be available only for partners and advisors.



A print-screen of how this look like is available below.



Energy adviser training

Home

Dashboard

Calendar

Private files

Site administration

GDPR

Available but not shown on course page

Available courses

Energy advice for frontline workers

If you are a frontline worker, work with clients, or would like a more detailed understanding of the role of energy advice in supporting people out of fuel poverty, then this is the course for you.

Energy advice and information for consumers

If you are interested in finding out how to reduce the cost of your gas and electricity, then this is the course for you.

Energy advice training for frontline workers

If you are a frontline worker, work with clients, or would like a more detailed understanding of the role of energy advice in supporting people out of fuel poverty, then this is the course for you.

Basic knowledge about the energy sector

Qualification

Energy at home

Consumer issue - Conscious consumer in the energy market

Social system



Each unit contains dedicated modules. Each module contains theory (as presentation in pdf or as module platform text) and a questions and answers section.

In order for partners to be able to adapt the course comfortably, we have also prepared a usage guide which was included in the deliverable D 3.2 - Training modules online and offline. The manual can also be used by organisations that are looking to replicate these training modules.

The Moodle as an open tool allows to extend access to the course for more organizations and institutions, it doesn't require a dedicated or paid Content Management System or service tools. This will also apply after the project's termination and course's update or extension.

FK also created a Moodle Admin Manual that facilitates the work of for local developers.

It describes how to navigate through the platform's administrative background, how to translate and adapt the course to one's language, specific needs and local conditions. The manual was used by project partners, but it can also be a convenient tool for other institutions interested in using the e-learning.

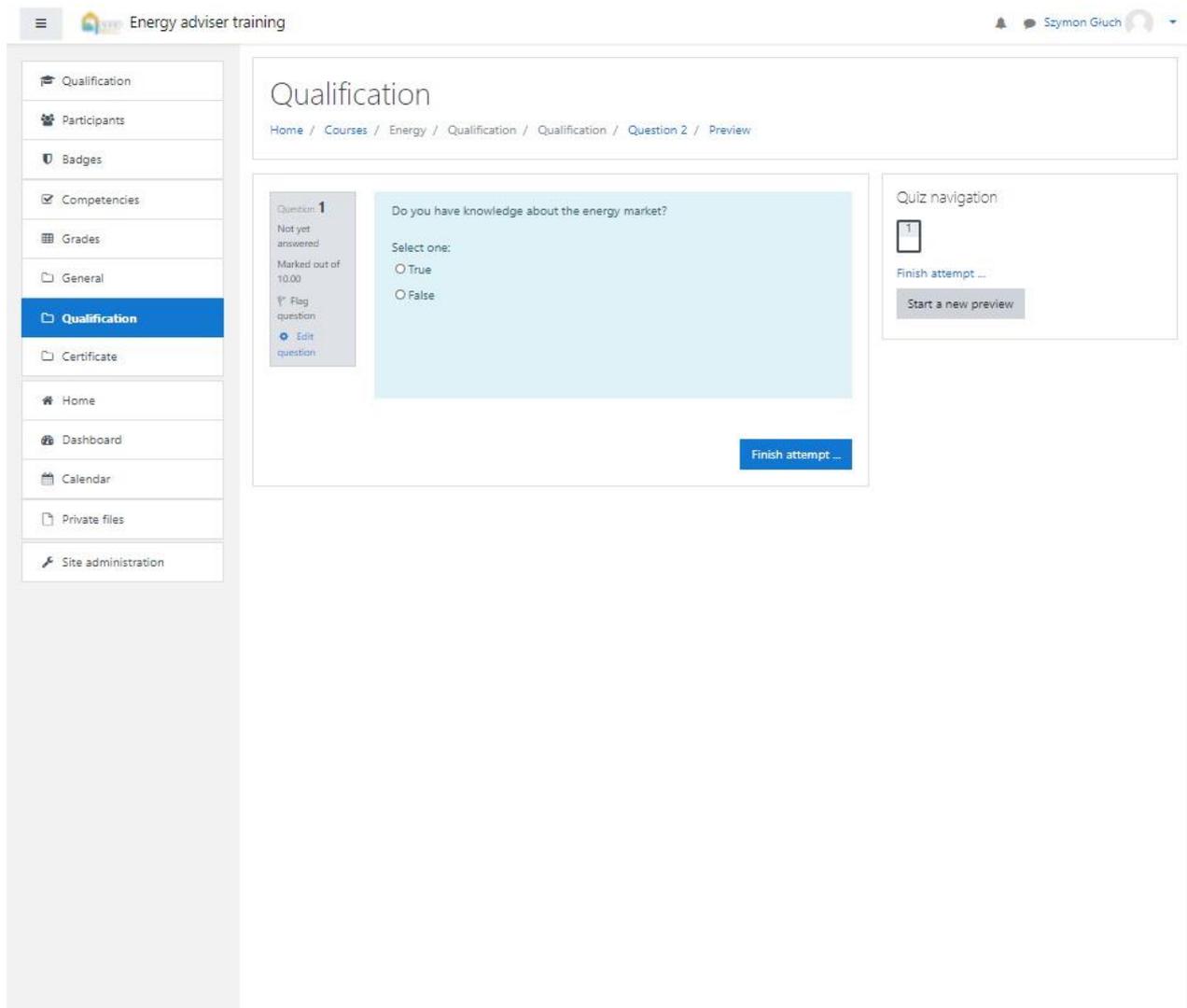
3. Course targets

The course is addressed to a diverse audience, both to people with extensive knowledge of the social welfare system and to those who have, for example, legal knowledge on energy market while not having a high level of knowledge about the principles of energy savings and efficiency in the household.

We intend to maintain the universal character of the course as well as attractiveness for all users with the possibility to provide basic knowledge where necessary. That is why we decided to prepare an entrance test, during which users independently assess their level of knowledge in specific areas, the nature of their work or voluntary service and their professional experience. The test can be adapted by each organisations to their national circumstances. Based on the results, the system assigns some modules that are compulsory and some as optional.

Being able to personalize the course, we can tailor it for advisors, frontline workers from various entities (both social workers and advisors from consumer organizations or other NGOs) as well as to individual consumers.





3. Educational path

We implemented the following rules in the teaching process:

- Students will receive a certificate after passing the final test. However, each partner can decide whether to use the certification process or not, depending on local/national circumstances. The aim is to increase the attractiveness of the course while avoiding the risk that the certificate is used in an inappropriate way (e.g., as an element of misleading the consumer by a dishonest energy seller).
- Each module includes a dedicated test as a part of the teaching process. To answer the questions, users need to apply the knowledge from the previous presentations. However, some cases questions are not exactly the same as in the taught material and



require the user's own analysis or calculation e.g., of electricity consumption, potential savings in the household.

Users are provided support during these. The system shows hints that additionally explain the specific situation, refer to but do not repeat the knowledge from the presentation. Users get another chance when selecting the wrong answer.

The path is also applied for the off-line course and is described in the document Training modules online and offline (initial) - recommended way of use (Deliverable 3.2). In the case of offline classes, the role of the trainer is more relevant as they decide on the method to conduct the course.

Certificates are generated by the platform once the final test is completed.



4. The course availability

National courses are available on dedicated subdomains, but they are not yet connected to the server. We are currently using dedicated addresses, but we will also introduce masking of the technical address in the browser. This means that when the subdomains below are clicked on the Polish server address will no longer be visible.

uk.stepenergy.eu
bg.stepenergy.eu
cz.stepenergy.eu
cy.stepenergy.eu
lv.stepenergy.eu
lt.stepenergy.eu
pl.stepenergy.eu
pt.stepenergy.eu
sk.stepenergy.eu

5. The national modifications and versions

Partners implemented their own modifications to the course and platform. The scale of the modifications varies: in some cases, changes are limited to adapting the presentation and questions and answers units, in some (e.g., in the case of the UK) course is extended with additional modules and videos. As described in Task 3.4, partners can adapt some of the national elements according to their own needs, especially high interest is reported to use video in national versions.

All national versions are maintained on the same platform, according to a common scheme, every partner can easily use materials prepared by another organization.



ANNEX 1. Moodle admin manual

1. Administrator login

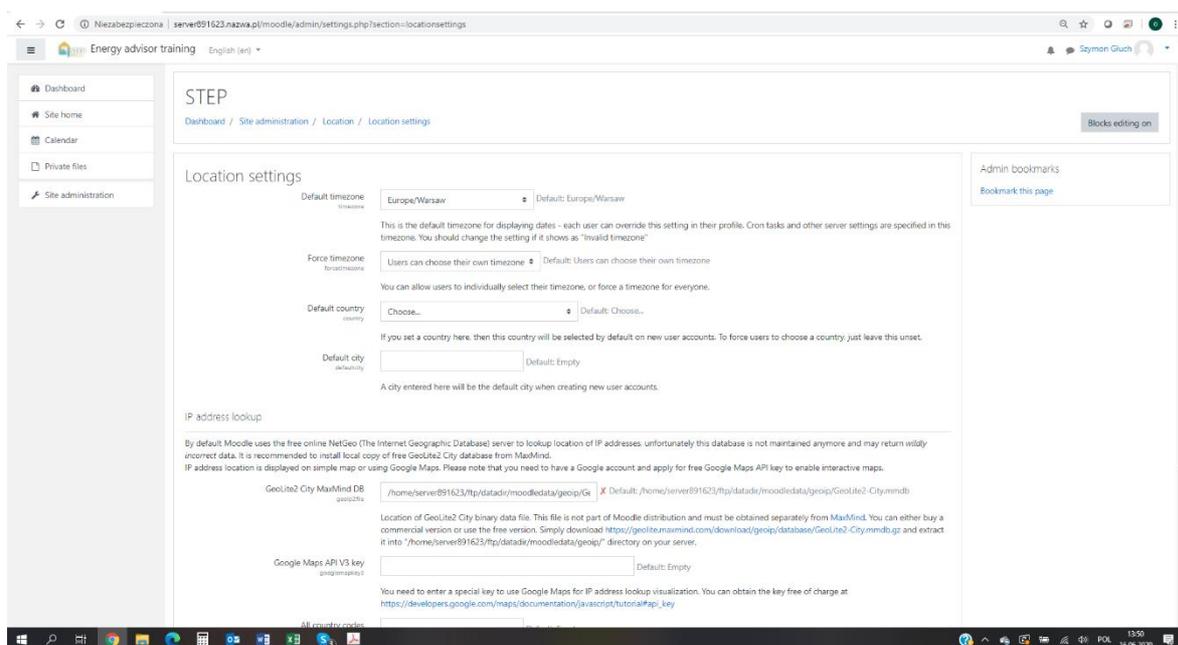
After logging in as an administrator, there is an additional section in the left menu **Site administration**.

Within this section you can administer the settings of Moodle. Using the horizontal menu you can access the following:

- Site administration
- Users
- Courses
- Grades
- Plugin
- Appearance
- Server
- Report
- Development

1.1 Site administration > Location settings

It's important to fill in the information about the time zone, as the users will by default operate in this set time zone.



The screenshot shows the Moodle administrator interface for 'Energy advisor training'. The left sidebar contains navigation options: Dashboard, Site home, Calendar, Private files, and Site administration. The main content area is titled 'STEP' and 'Location settings'. It includes a 'Blocks editing on' button in the top right. The 'Location settings' section contains several configuration options:

- Default timezone:** A dropdown menu set to 'Europe/Warsaw'. Below it, a note states: 'This is the default timezone for displaying dates - each user can override this setting in their profile. Cron tasks and other server settings are specified in this timezone. You should change the setting if it shows as "Invalid timezone".'
- Force timezone:** A dropdown menu set to 'Users can choose their own timezone'. Below it, a note states: 'You can allow users to individually select their timezone, or force a timezone for everyone.'
- Default country:** A dropdown menu set to 'Choose...'. Below it, a note states: 'If you set a country here, then this country will be selected by default on new user accounts. To force users to choose a country, just leave this unset.'
- Default city:** A text input field set to 'Empty'. Below it, a note states: 'A city entered here will be the default city when creating new user accounts.'

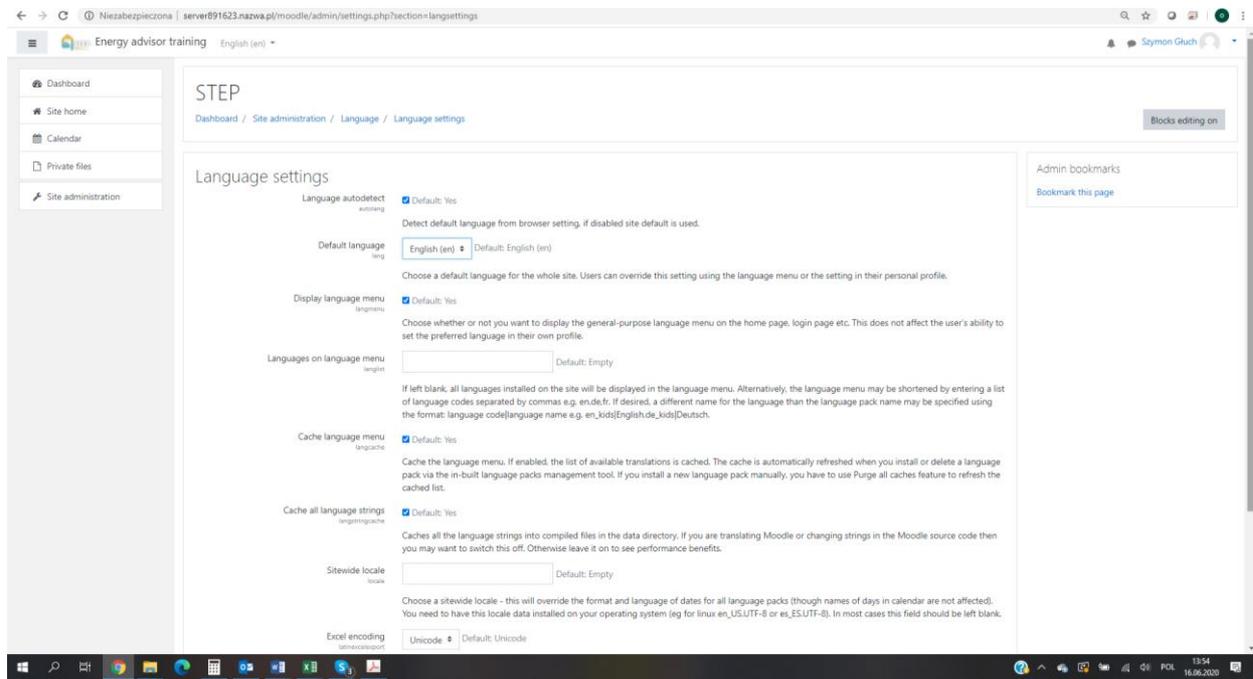
Below these settings is the 'IP address lookup' section, which includes a note about the NetGeo database and instructions for installing a local copy of the GeoLite2 City database. It contains two fields:

- GeoLite2 City MaxMind DB:** A text input field containing the path '/home/Server891623/ftp/datasets/moodledata/geoip/Ge'. Below it, a note states: 'Location of GeoLite2 City binary data file. This file is not part of Moodle distribution and must be obtained separately from MaxMind. You can either buy a commercial version or use the free version. Simply download https://geoip.maxmind.com/download/geoip/database/GeoLite2-City.mmdb.gz and extract it into "/home/Server891623/ftp/datasets/moodledata/geoip/" directory on your server.'
- Google Maps API V3 key:** A text input field set to 'Empty'. Below it, a note states: 'You need to enter a special key to use Google Maps for IP address lookup visualization. You can obtain the key free of charge at https://developers.google.com/maps/documentation/javascript/tutorial#api_key'



1.2 Site administration > Language settings

Partners should setup the language and define the language that will be displayed by default. We suggest keeping English for future support from FK side.



The screenshot shows the Moodle language settings page. The page title is "STEP" and the breadcrumb is "Dashboard / Site administration / Language / Language settings". The settings include:

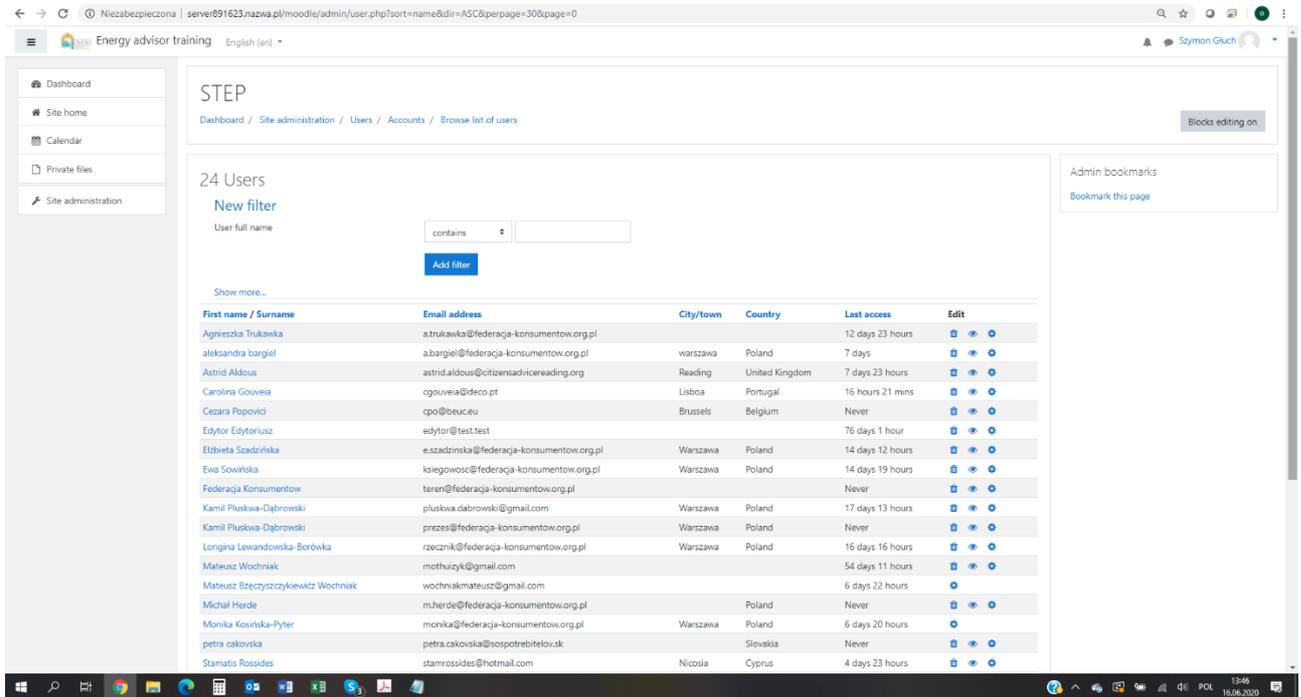
- Language autodetect: Default: Yes. Detect default language from browser setting, if disabled site default is used.
- Default language: English (en) [dropdown]. Default: English (en). Choose a default language for the whole site. Users can override this setting using the language menu or the setting in their personal profile.
- Display language menu: Default: Yes. Choose whether or not you want to display the general-purpose language menu on the home page, login page etc. This does not affect the user's ability to set the preferred language in their own profile.
- Languages on language menu: [empty text box]. Default: Empty. If left blank, all languages installed on the site will be displayed in the language menu. Alternatively, the language menu may be shortened by entering a list of language codes separated by commas e.g. en,de,fr. If desired, a different name for the language than the language pack name may be specified using the format: language code|language name e.g. en_kids|English de_kids|Deutsch.
- Cache language menu: Default: Yes. Cache the language menu. If enabled, the list of available translations is cached. The cache is automatically refreshed when you install or delete a language pack via the in-built language packs management tool. If you install a new language pack manually, you have to use Purge all caches feature to refresh the cached list.
- Cache all language strings: Default: Yes. Caches all the language strings into compiled files in the data directory. If you are translating Moodle or changing strings in the Moodle source code then you may want to switch this off. Otherwise leave it on to see performance benefits.
- Sitewide locale: [empty text box]. Default: Empty. Choose a site-wide locale - this will override the format and language of dates for all language packs (though names of days in calendar are not affected). You need to have this locale data installed on your operating system (eg for linux en_US.UTF-8 or es_ES.UTF-8). In most cases this field should be left blank.
- Excel encoding: Unicode [dropdown]. Default: Unicode.

1.3 Users

Once a new user registers, the administrators will receive an email with a link to confirm the registration. All new registrations will also be available on the user list with a link on the right side which can confirm the user access.

Here you can also add higher access rights (like another administrator for example).





Energy advisor training English (en) - Symon Gluch

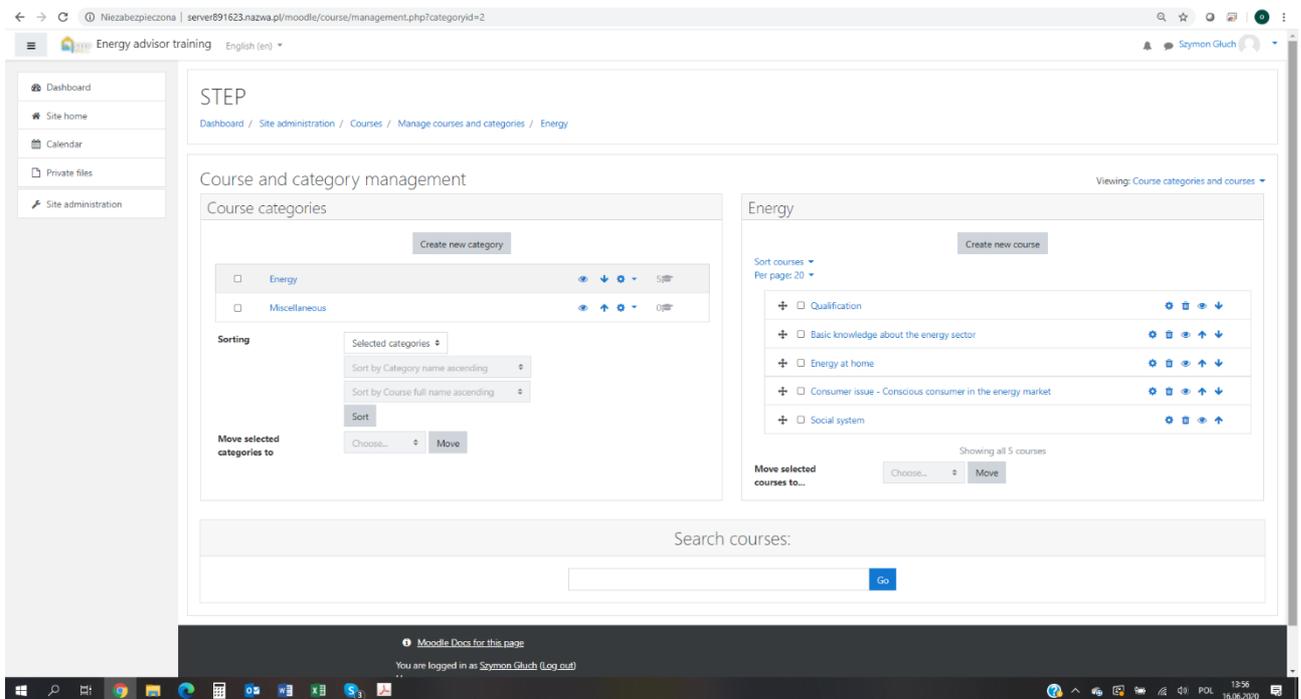
STEP
Dashboard / Site administration / Users / Accounts / Browse list of users

24 Users
New filter
User full name: [] contains [] Add filter

First name / Surname	Email address	City/town	Country	Last access	Edit
Agnieszka Trukawka	a.trukawka@federacja-konsumentow.org.pl			12 days 23 hours	[] [] []
aleksandra bargiel	a.bargiel@federacja-konsumentow.org.pl	warszawa	Poland	7 days	[] [] []
Astrid Aldous	astrid.aldous@citizensadvice.org	Reading	United Kingdom	7 days 23 hours	[] [] []
Carolina Gouveia	rgouveia@deco.pt	Lisboa	Portugal	16 hours 21 mins	[] [] []
Cezara Popovici	cpo@beuc.eu	Brussels	Belgium	Never	[] [] []
Edytor Edytoriusz	edytor@test.test			76 days 1 hour	[] [] []
Elżbieta Szadzińska	e.szadzińska@federacja-konsumentow.org.pl	Warszawa	Poland	14 days 12 hours	[] [] []
Ewa Sowińska	ksiegowosc@federacja-konsumentow.org.pl	Warszawa	Poland	14 days 19 hours	[] [] []
Federacja Konsumentow	teren@federacja-konsumentow.org.pl			Never	[] [] []
Kamil Pluskwa-Dąbrowski	pluskwa.dabrowski@gmail.com	Warszawa	Poland	17 days 13 hours	[] [] []
Kamil Pluskwa-Dąbrowski	prezes@federacja-konsumentow.org.pl	Warszawa	Poland	Never	[] [] []
Longina Lewandowska-Borówka	rzecznik@federacja-konsumentow.org.pl	Warszawa	Poland	16 days 16 hours	[] [] []
Mateusz Wochniak	mchozzyk@gmail.com			54 days 11 hours	[] [] []
Mateusz Bączyszczkiewicz Wochniak	wochniakmateusz@gmail.com			6 days 22 hours	[] [] []
Michał Herde	m.herde@federacja-konsumentow.org.pl		Poland	Never	[] [] []
Monika Kosińska-Pyter	monika@federacja-konsumentow.org.pl	Warszawa	Poland	6 days 20 hours	[] [] []
petra cakovska	petra.cakovska@sospotrebitelov.sk		Slovakia	Never	[] [] []
Stamatis Rossides	stamrossides@hotmail.com	Nicosia	Cyprus	4 days 23 hours	[] [] []

1.4 Courses

In this section partners can make translations of the courses and the composing unit names.



Energy advisor training English (en) - Symon Gluch

STEP
Dashboard / Site administration / Courses / Manage courses and categories / Energy

Course and category management
Viewing: Course categories and courses

Course categories

- Energy
- Miscellaneous

Sorting
Selected categories: []
Sort by Category name ascending
Sort by Course full name ascending
Sort: []
Move selected categories to: [] Move

Energy

Sort courses: []
Per page: 20

- Qualification
- Basic knowledge about the energy sector
- Energy at home
- Consumer issue - Conscious consumer in the energy market
- Social system

Showing all 5 courses
Move selected courses to: [] Move

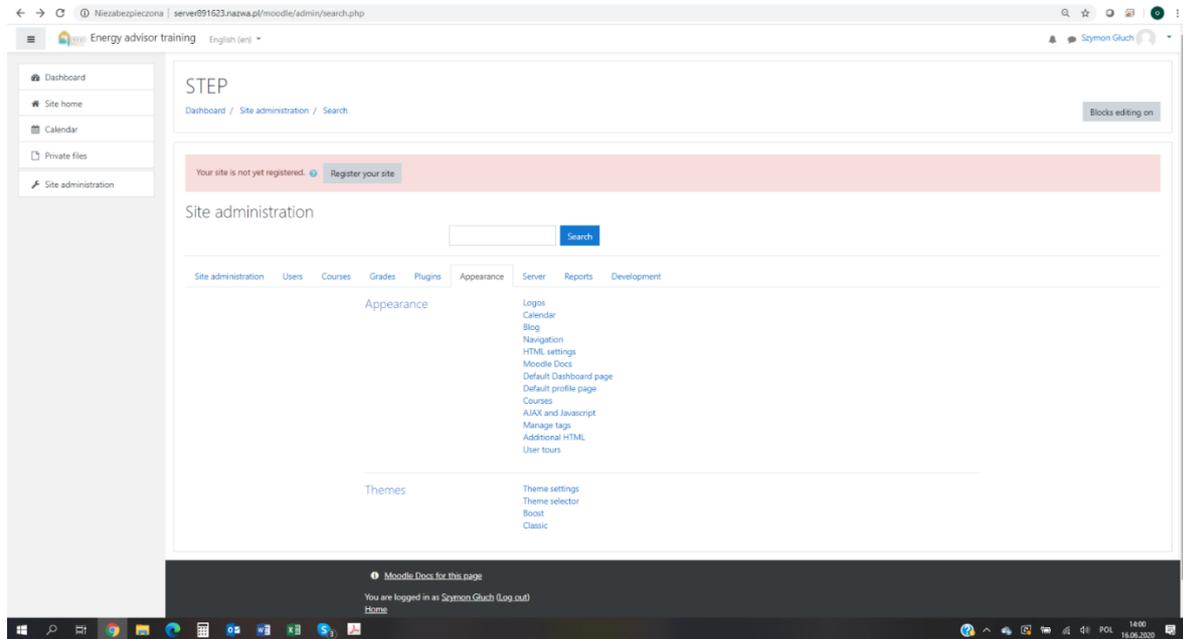
Search courses: [] Go



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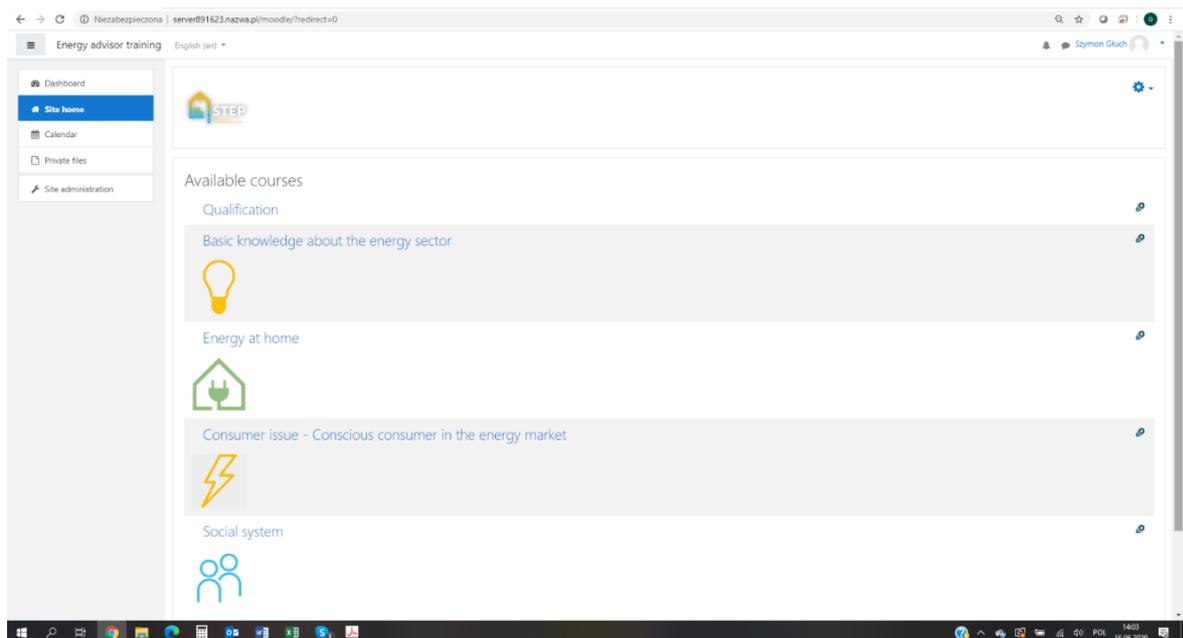
1.5 Appearance

In this section partners can modify some visual elements (i.e., logos)



2. Content edits

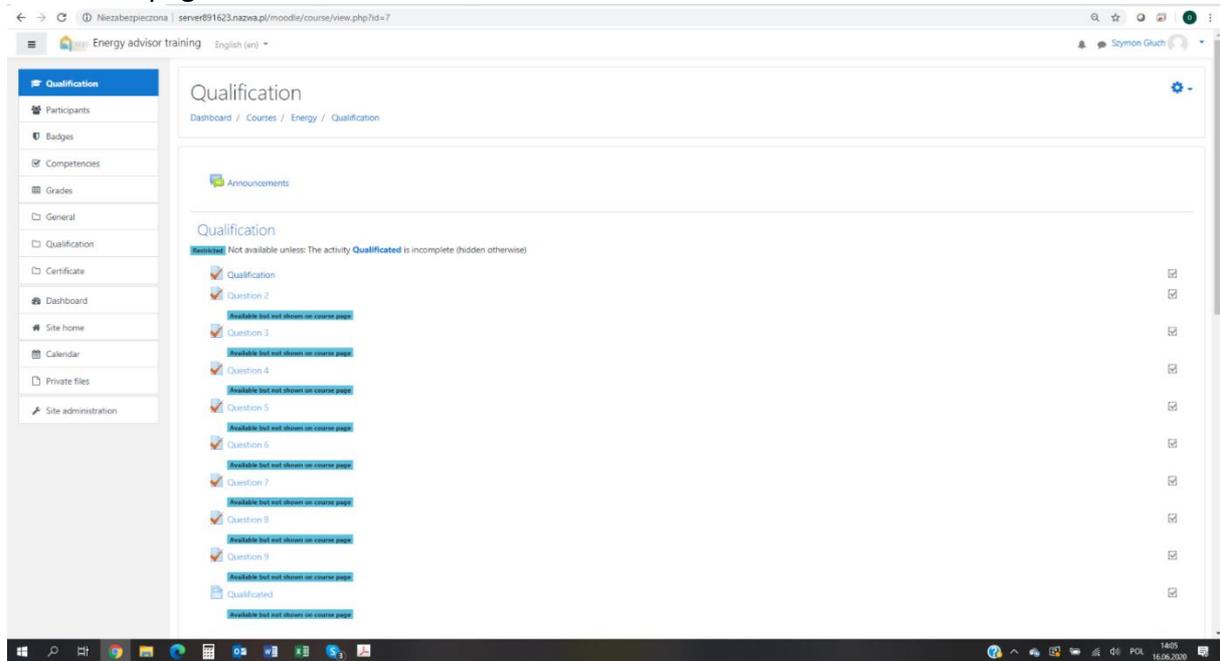
Being logged on as administrator, partners can edit the content of the course. The easiest way to navigate is through *Site home* on the left menu. Here you will see Qualification and four course units.



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2.1 Qualification

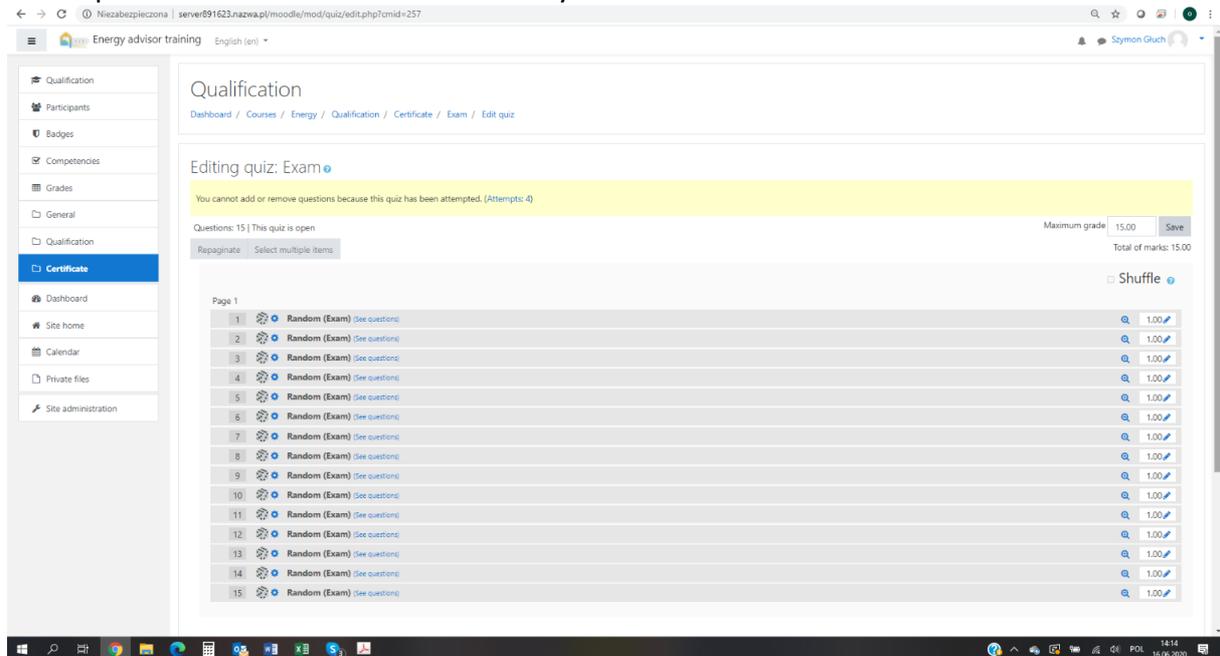
Here partners can edit the qualification test name, as well as the questions, and the submitted pages.



The screenshot shows the Moodle interface for editing a qualification. The left sidebar contains navigation options: Qualification, Participants, Badges, Competencies, Grades, General, Qualification, Certificate, Dashboard, Site home, Calendar, Private files, and Site administration. The main content area is titled 'Qualification' and shows a list of items: Qualification, Question 2, Question 3, Question 4, Question 5, Question 6, Question 7, Question 8, Question 9, and Qualified. Each item has a status indicator and a checkbox on the right.

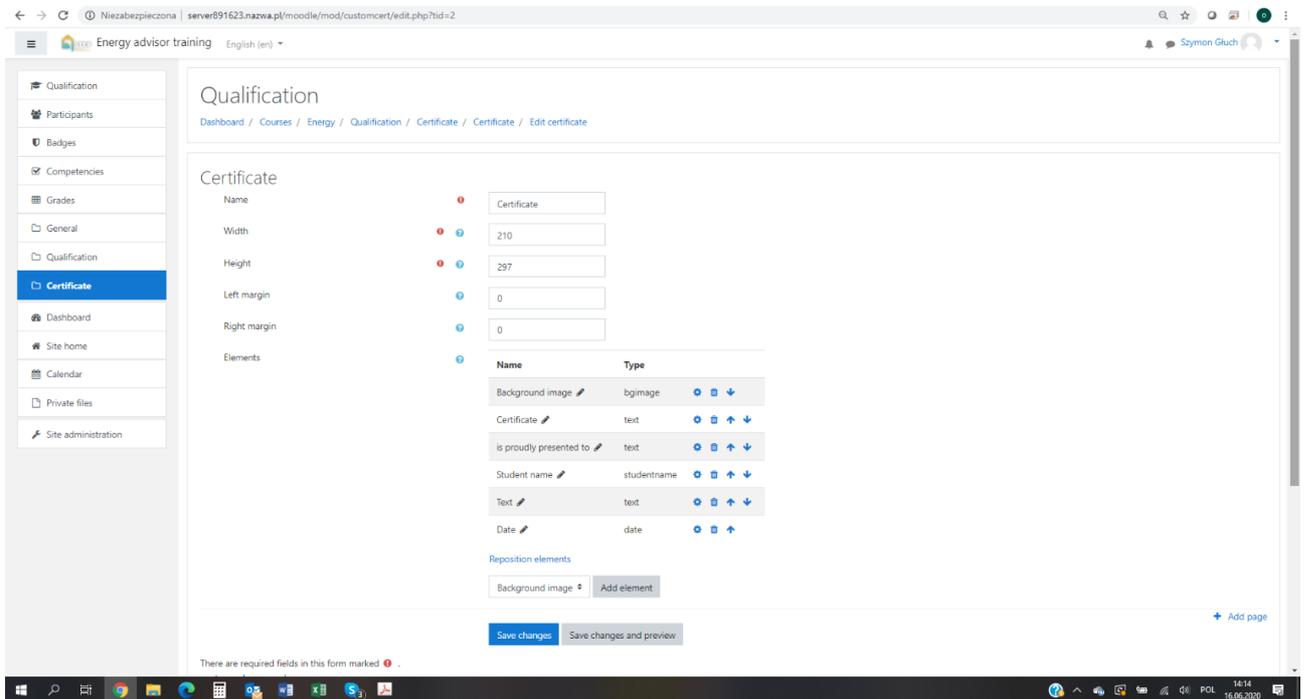
2.2. Certificate

Below the qualification, partners can find Exam and Certificate section, where they can edit Exam questions and Certificate text and layout.



The screenshot shows the Moodle interface for editing a certificate exam. The left sidebar is the same as in the previous screenshot. The main content area is titled 'Qualification' and shows the 'Certificate / Exam / Edit quiz' section. A yellow warning message states: 'You cannot add or remove questions because this quiz has been attempted. (Attempts: 0)'. Below this, there are options for 'Repaginate' and 'Select multiple items'. The exam questions are listed in a table with 15 rows, each containing a question number, a 'Random (Exam)' label, a 'See questions' link, and a grade of 1.00. A 'Shuffle' button is visible on the right side of the table.

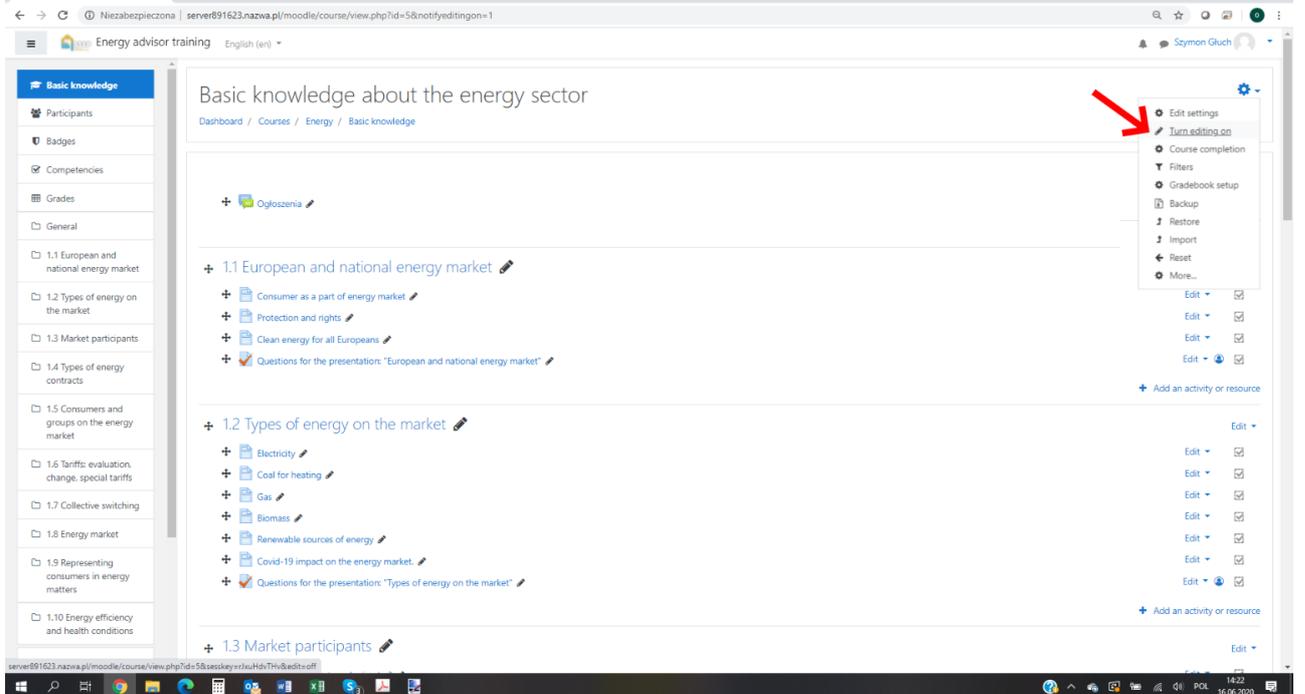




3. Content edit window

You can edit elements by selecting  icon on the page.

You can turn edit on under this icon, so all the content will be editable:



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Independently of which element you edit, the window where you have to make the translations looks similar. Most important is the name and content fields.

Example of training content page within the content block:

General

Name

Description

Rich text editor toolbar: Bold, Italic, Underline, Bulleted list, Numbered list, Link, Unlink, Image, Video, Table, Undo, Redo, Print, Refresh, Help.

Display description on course page

Content

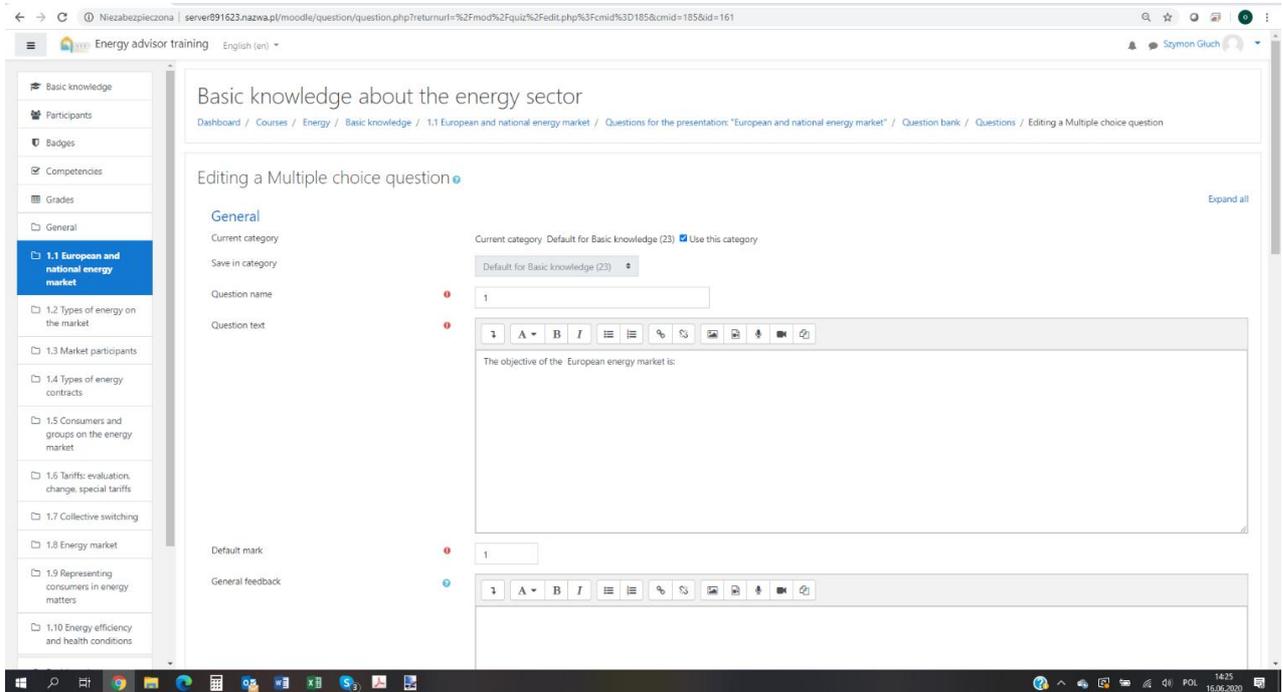
Page content

Rich text editor toolbar: Bold, Italic, Underline, Bulleted list, Numbered list, Link, Unlink, Image, Video, Table, Undo, Redo, Print, Refresh, Help.

Consumers are at the centre of the EU's energy policy, and a wide range of initiatives has been taken to make consumers an active part of the clean energy transition and help them save money and energy.

By providing consumers with information and offering them options on how they can participate in the energy market, they will be better protected and in a stronger position in the energy supply chain.

Example of quiz question within content block:



The screenshot shows a Moodle quiz editing page titled "Basic knowledge about the energy sector". The left sidebar contains a navigation menu with categories like "Basic knowledge", "Participants", "Badges", "Competencies", "Grades", and "General". Under "General", the "1.1 European and national energy market" category is selected.

The main content area shows "Editing a Multiple choice question". The "General" tab is active, displaying the following fields:

- Current category:** Default for Basic knowledge (23) [Use this category]
- Save in category:** Default for Basic knowledge (23)
- Question name:** 1
- Question text:** The objective of the European energy market is:
- Default mark:** 1
- General feedback:** (empty)

Each text input field has a corresponding rich text editor toolbar above it, including options for Bold, Italic, Underline, Bulleted list, Numbered list, Link, Unlink, Image, Video, Table, Undo, Redo, Print, Refresh, and Help.



Below the quiz question content, you will find options:

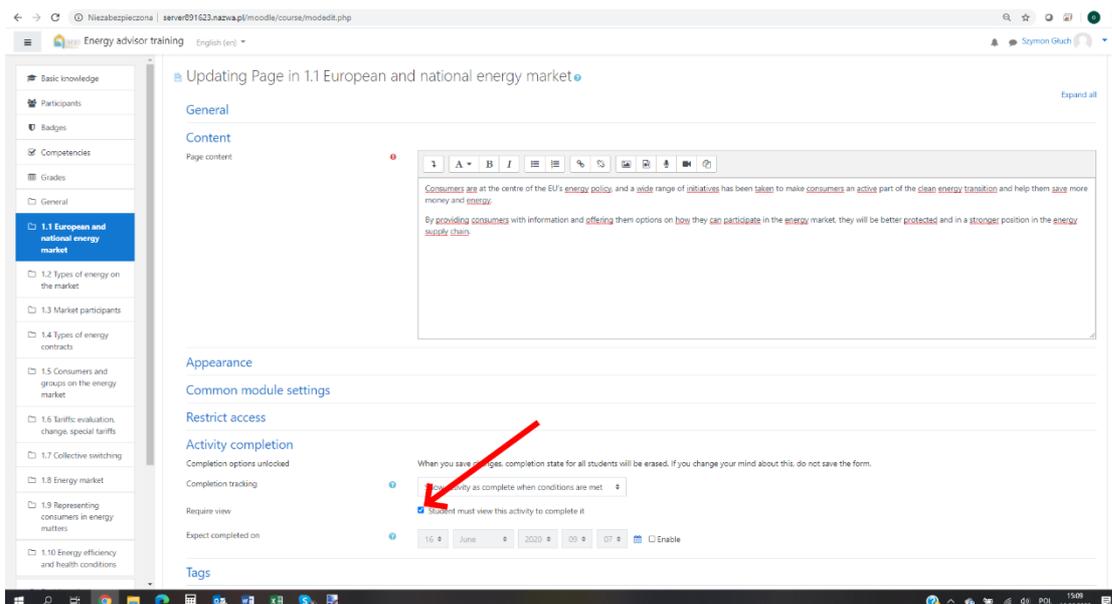
- One or multiple answers option, depending how you want the question to be answered
- Grade on each answer, where you have to keep in mind:
 - All correct answers should give 100% grade (so if you have 3 correct answers within 5 answers available, you should grade each correct answer 33,33333%)
 - All incorrect answers, especially within multiple answer question should also be graded, we suggest you use the percentage of all questions but with a minus mark (so if you have 3 incorrect answers within 5 answers available, you should grade each incorrect answer with -20%). This is required in order to show the proper confirmation after the user answers – 1 multiple questions if you check all good and one wrong, Moodle has to know that it's not 100%.
- Combined feedback, where you can show if the answer was correct, partially correct or wrong. You can show some explanations or hints here as well.
- Multiple tries, where you should set the penalty at 0% if you want to let the users try multiple times in the case their answer is wrong.

4. Adding new pages or questions

It's important to keep the basic settings described above to have the training functional and in line with other content. You can check settings in any existing similar element and apply those to the one you create.

An important one to mention is the Activity completion section:

- On the unit content page you should tick *Student must view this activity to complete it*. This will automatically place a checkbox on the student course content list – as content is already read by users.



- The quiz questions should be automatically set to as follows:

Activity completion

Completion options unlocked

When you save changes, completion state for all students will be erased. If you change your mind about this, do not save the form.

Completion tracking



Show activity as complete when conditions are met

Require view

Student must view this activity to complete it

Require grade

Student must receive a grade to complete this activity

Require passing grade



Require passing grade Or all available attempts completed

Expect completed on

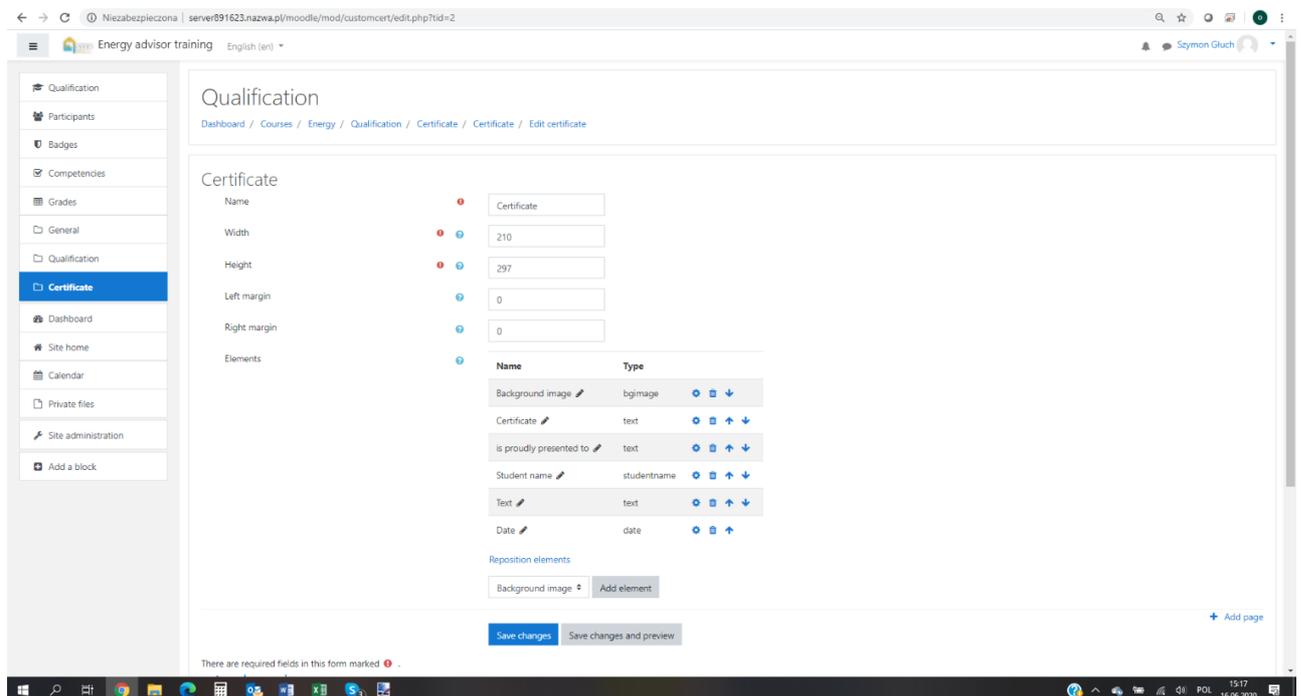


16 June 2020 09 12 Enable

5. Certificate edit

The certificate contains a few elements that could be graphical, text or even generated (like specific student data – name).

Editing the certificate, you have to remember that by adding any new elements you have to reposition the layout without alignment tools by drag & drop.



The screenshot shows the Moodle 'Certificate edit' interface. The left sidebar contains navigation options: Qualification, Participants, Badges, Competencies, Grades, General, Qualification, Certificate (selected), Dashboard, Site home, Calendar, Private files, Site administration, and Add a block. The main content area is titled 'Certificate' and includes the following fields:

- Name: Certificate
- Width: 210
- Height: 297
- Left margin: 0
- Right margin: 0
- Elements: A table with columns 'Name' and 'Type'.

Name	Type
Background image	bgimage
Certificate	text
is proudly presented to	text
Student name	studentname
Text	text
Date	date

Below the elements table, there is a 'Reposition elements' section with a 'Background image' button and an 'Add element' button. At the bottom, there are 'Save changes' and 'Save changes and preview' buttons. A status message at the bottom of the form reads: 'There are required fields in this form marked'.

An example of certificate is available below.



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Certificate

is proudly presented to

Szymon Gluch

.....

This is to certify the above mentioned participant followed the Online Course consisting of 4 e-learning modules on vulnerable consumer support on energy sector. By undergoing this online training and successfully passing the e-tests, we hereby confirm that the participant gained extensive knowledge on consumer law and rights in the energy market area.

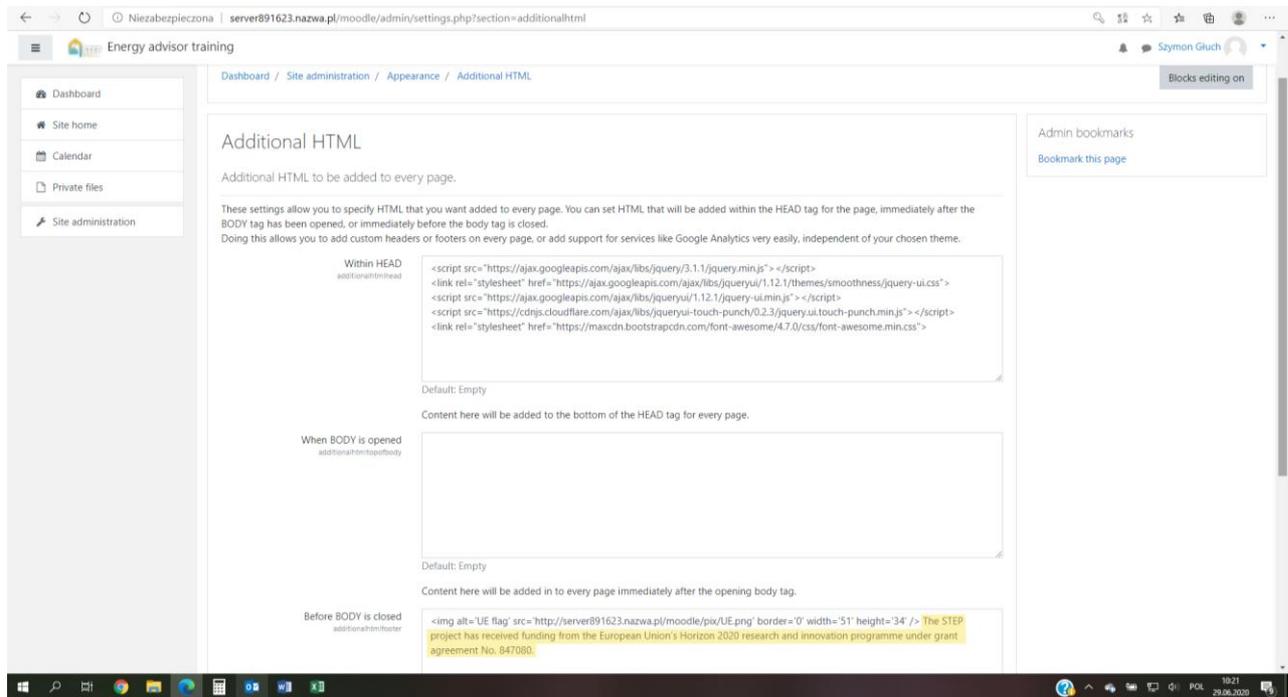
June 16, 2020



6. Project financing statement

The obligatory text about project financing in the footer can be translated.

You can access the edit as follows: Site administration > Appearance > Additional HTML



The screenshot shows the Moodle administration interface for 'Energy advisor training'. The 'Additional HTML' settings page is displayed, allowing users to specify HTML to be added to every page. The page is divided into three sections:

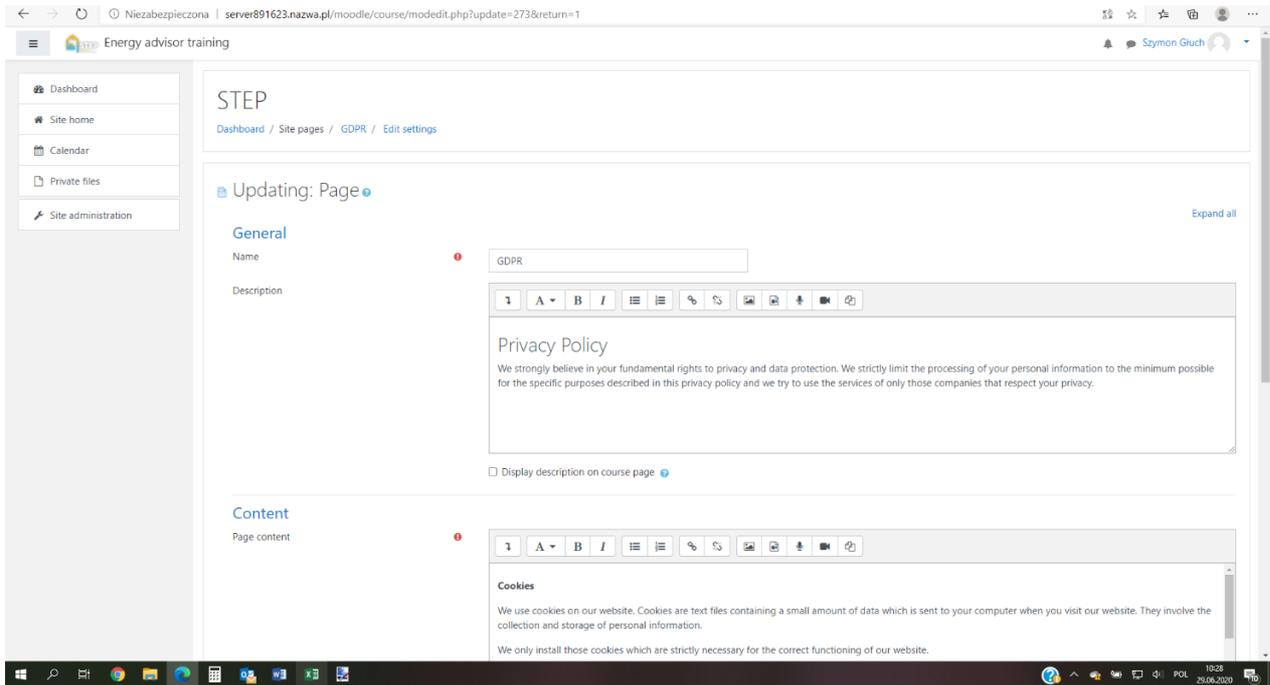
- Within HEAD**: Contains code for loading jQuery and jQuery UI libraries.
- When BODY is opened**: A section for adding content to the bottom of the HEAD tag.
- Before BODY is closed**: Contains an image alt text and a paragraph about funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 847080.

7. GDPR statement

Each user has to agree to the terms of use for the website and the conditions of personal data processing.

The text can be translated in: Site pages > GDPR > Edit settings





The screenshot shows a Moodle course page titled "Updating: Page" for the course "Energy advisor training". The page is being edited and contains two main sections: "General" and "Content".

General

- Name: GDPR
- Description: Privacy Policy
We strongly believe in your fundamental rights to privacy and data protection. We strictly limit the processing of your personal information to the minimum possible for the specific purposes described in this privacy policy and we try to use the services of only those companies that respect your privacy.
- Display description on course page:

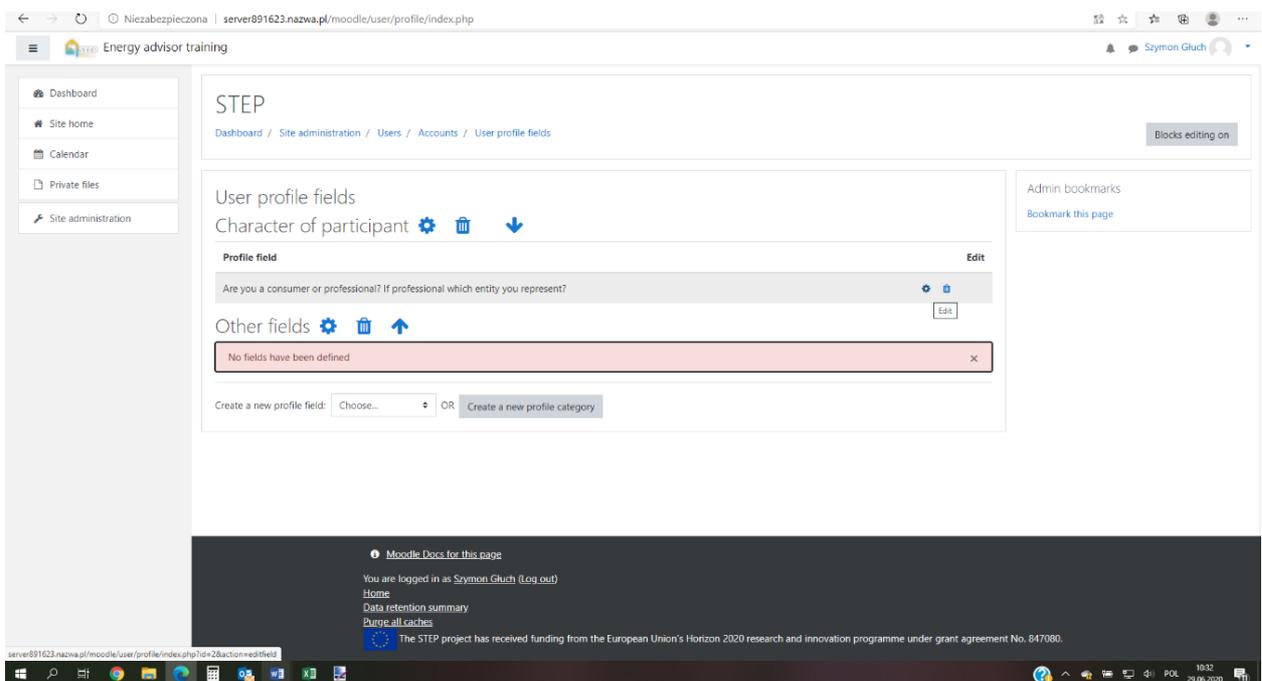
Content

- Page content: Cookies
We use cookies on our website. Cookies are text files containing a small amount of data which is sent to your computer when you visit our website. They involve the collection and storage of personal information.
We only install those cookies which are strictly necessary for the correct functioning of our website.

8. User information – organisation name or consumer

As requested by the majority, the additional field during registration about user profile (name of represented organisation or consumer) is required.

The text can be translated at: Site administration > Users > Accounts > User profile fields



The screenshot shows the Moodle "User profile fields" administration page. The page is titled "User profile fields" and shows the "Character of participant" field.

User profile fields

- Character of participant (Settings, Delete, Down arrow)
- Profile field: Are you a consumer or professional? If professional which entity you represent? (Edit)
- Other fields (Settings, Delete, Up arrow)
- No fields have been defined (Close)
- Create a new profile field: Choose... OR Create a new profile category

Footer information:

- Moodle Docs for this page
- You are logged in as **Szymon Gluch** (Log out)
- Home
- Data retention summary
- Purge all caches
- The STEP project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 847080.



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