A holistic and Scalable Solution for research, innovation and Education in Energy Transition

D2.4 Design of monitoring tools

Work Package	WP2 Energy transition skills identification and societal challenges
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Executive Summary

The purpose of the ASSET project is to create and offer methodologies, tools and resources for the fast creation of innovative educational programmes to close the KSC gap and to foster the energy transition process. The ASSET educational offering extend along three directions: (a) by using the EMMA platform (www.europeanmoocs.eu) as a hosting system of MOOCs produced by the ASSET partners, (b) by using the ASSET marketplace (http://energy-transition.academy) as a web-based unique entry point for delivering on-demand (by companies and stakeholders) educations programmes and (c) accelerating the creation of short programmes exploiting the learning graph concept and tool according to its novel classification ontologies called Learning Graph. While the ASSET marketplace is mainly corporate stakeholder-oriented, the ASSET MOOC offer has targeted a different typology of learners: university students, energy sector workers, and citizens at large. For both the learning environments, monitoring tools are required to assess the value we offer and optimised it. For the learning graph concept and tool, the relevant information is included in D3.1 Learning graphs.

The key objectives of the task T2.4 “Monitoring tools” are the following:

- to identify learner expectations, prior knowledge, and user satisfaction of the MOOC offer;
- to develop tools for monitoring the satisfaction of tutors and companies in using the learning graph tool and the marketplace;
- to collect feedback to refine ASSET offerings and to identify concrete elements for the ASSET sustainability plan through a set of tools: the course registration form, the expectation questionnaire, the exit questionnaire for enrolled and not enrolled people, and monitoring tools for non-MOOC course. A set of Mini-surveys has been prepared for special needs as concerning for example specific target-groups or gender issues.

This deliverable presents the evaluation methodology and the monitoring tools (see ANNEX 1 e 2), developed by the partners to meet the task objectives and applied during the project, to monitor the effectiveness of the ASSET educational programme.

The ASSET evaluation methodology is based mainly on surveys but combined with a comprehensive set of analytical tools, of diverse nature, to get to a variety of insights:

- from an **operational perspective**, for example in collecting data on how learners use MOOCs and platforms, and what kind of adjustments are required to meet their expectations;
- from a **cognitive perspective**, for example in getting insights as to how a certain sub-group of users approaches the topic, what is their learning style, how satisfied they are with it, what were their expectations and opinions about the learning path.

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List of Acronyms

Abbreviation / acronym	Description
CIP	Competitiveness Innovation Programme
KSC	Knowledge Skills and Competences
LRS	Learning Record Store
WP	Work package

1. Introduction

1.1 Purpose and scope

This deliverable is the outcome of Task 2.4 Monitoring tools which aims to define and set in place all the necessary tools that will enable the monitoring of the ASSET offer. By "tools", we refer mainly to digital tools which include online questionnaires/mini surveys and software tools embedded in the platforms we use to track the interest and satisfaction of the user. The ASSET offering that we aim at measuring include:

- MOOCs,
- Face-to-face and blended short programmes
- The ASSET Marketplace and the
- ASSET learning graph tool and concept.

While for the last one, the relevant information is included in D3.1 for the rest, we describe in this deliverable both the methodology, software tools and questionnaires that will be used.

1.2 The monitoring approach

The European Multiple MOOC Aggregator (from now 'Emma platform') has been developed under the EU CIP programme. The purpose of the EMMA project was to showcase excellence in innovative teaching methodologies and learning approaches through the piloting of MOOCs on different subjects. To achieve this, EMMA provided a system for the delivery of free, open, online courses in multiple languages from different European universities. The project ended in 2017 but, since then, it has hosted several European MOOC Projects. The ASSET project has built its MOOC offer in Energy transition on the Emma' features and experience. By April 2020 it will be ready for the enrolment process.

The aim of the task 2.4 "Monitoring Tools" is to identify, test and validate a proper evaluation methodology to be used for:

- Creating monitoring tools for measuring the impact of the ASSET offer;
- Assessing the effectiveness of the learning environments and their tools.

The first action is related to how we will collect data from learners, which measures we propose to use and which are the collection tools we will put in place for the purposes of monitoring learning activities, dropout rates and follow-up as well as understanding and optimizing learning and the environments in which it occurs. A dedicated set of questionnaires has been developed to tackle the learners experience and to draw their personal profile. Specific actions on the EMMA platform will trigger the submission of a set of questions which the learner is asked to complete on SurveyMonkey technologies:

- At the time of his/her first access to a course (Registration Form + Expectations Questionnaire)
- At the time of his/her progressing in the chosen course (Mini survey)
- At the time of his/her ending a specific learning path (Exit Questionnaire).

The data collected by the questionnaires will enable the partners to profile learners as per the main socio-demographic variables and also per info which are more strictly related to the unique nature of the ASSET proposal (e.g.: expertise into the field).

The second action focuses on data analysis that would provide useful information on student engagement and success at various stages of the learning process and will lead to an understanding of the impact that the ASSET offer may have in Energy Transition. This task will also comprise the production of take-outs from the EMMA experience to be transformed into future actions. Learning analytics collected in the EMMA platform will allow to obtain additional valuable information about

participants' behaviour and usage patterns on the platform. Such data will be added to the various data voluntarily supplied by learners about themselves - what they are looking for in ASSET programme and what they expect from the EMMA experience, and finally how they are feeling about their usage of the platform and their learning experience with the MOOCs.

The third action concerns the cyclical evaluation of the ASSET programme. The evaluation will enable the consortium to see how different target groups enjoy the ASSET educational offer and will provide some solid indicators for the sustainability model.

All the actions identified will produce a powerful interpretative framework to the learning behaviour analysis as well as to the assessment of ASSET educational programme.

The Evaluation Methodology will generate insights specifically for those challenges where the learner reactions are meaningful, as they are able to indicate that a specific issue is emerging within a broader view of the project. Moreover, the matching between expectations and accomplishments will enable the partners to measure the effectiveness of the ASSET project. Therefore, two main areas of output are expected by this combined effect of analytical tools:

- Continuous customization and improvement of the ASSET offer
- Permanent support of learners and teachers/partner institutions in making the most out of their learning path and improve the impact and effectiveness of ASSET offer.

The questions are designed to cover behaviours, motives and opinions: the various outcomes, the reasons why, the level of satisfaction with MOOCs and Emma.

1.3 Structure of the deliverable

This deliverable is structured in 4 parts. After this introduction on the ASSET evaluation methodology, chapter 2 focuses on MOOCs and faces the design of monitoring tools, their target, scopes and data highlighting how different types of data can contribute to offer a complete overview of learner performance, expectations and satisfaction. Chapter 3 presents the monitoring tools, mainly questionnaires that will enable the assessment of the ASSET face-to-face short programmes across the ASSET diverse educational experiences. Chapter 4 extends the monitoring strategy to the ASSET marketplace using Google Analytics. The deliverable is integrated by 2 Annexes containing the tools developed as settled to monitor the MOOC experience, to focus on selected target, or to gather feedback from classroom-based blended learning.

1.4 Relation to other WPs and tasks

Task T2.4, of which this deliverable is the result, is pivotal in the ASSET project being directly related to WP2, WP3 and WP4 and, also with WP1 and WP5. The educational offer in the ASSET project is in fact used to bridge the skill gap, to engage stakeholders, to create awareness and to communicate the Energy Transition. For these reasons, monitoring the project can be considered a quite transversal activity.

2. Designing monitoring tools for ASSET MOOCs

The Evaluation Methodology in the ASSET project will be retrospective in nature and will allow the consortium to prospect the ASSET potential in covering the evolving educational needs of the different types of students who will access the platform and the marketplace in due time: in fact, although the initial cluster of students will initially be very likely a more traditional group of people with some kind of relation to the academic world (being the recruitment initially offered via academic institutions), we aim at widening of the target groups as long as the partners will be able to spread their network of relations outside it, to include private and public companies and any other entity interested in Energy Transition and related topics. This deliverable is prepared at the end of M10, when MOOCs are going to be launched: the first two blocks of tools are therefore described in their detail, since both the registration (Entry) set of questions and the expectation set of questions have been circulated to the partners and comments, amendments, cancellations and additions have been received and put into effect. The evaluation data collected will allow us to develop an in-depth analysis and to obtain insights into the typologies of learners in connection with their usage behaviour(s) and with their feedback on their learning experience.

In this document we are mainly describing the activities pertaining to learners. The main steps of the **Research Design** include

- Collecting
- Processing and Analysing
- Reporting

which will be described in detail in the next sections.

Data are collected in three ways:

- in the first instance, through questionnaires connected to the EMMA platform and administered at user first access to the platform, during the learning process, and at the end of MOOC experience
- through tracking technologies embedded in the Emma Platform
- through Google Analytics features and applications.

Learning Analytics has been settled on the Emma platform thanks to its tracking features. Combined with the Google Analytics Services, it will help to understand:

- How to support the learning process,
- How to quantify and measure related KPIs, such as:
    - Number of enrolled students
    - Number of students really engaged in learning
    - Completion rate
    - Learning styles supported in ASSET
    - Skills developed and further educational needs

Questions are designed to cover behaviours, motives and opinions: the various outcomes, the reasons why, the level of satisfaction with MOOCs and Emma.

The process of production of the mentioned questionnaires has involved all the partners and had started at the very beginning of the ASSET project, following several subsequent steps:

- During the Kick-Off Meeting (Madrid, May 2019) a general overview of the proposed method was presented, mainly aimed at illustrating to the partners which were the milestones of the process imagined by UNINA, and what connections it held with the Learning Analytics and Tracking
- In the following months, UNINA has worked at the drafting of the entry questionnaire essentially aimed at collecting a basic profile of the learner. The questionnaire was drafted and submitted to the partners for revisions and comments.

- During an online webinar, the workflow was presented and discussed, and some definitions of learner clusters was stated as identified below:
    - **enrolled** – explicitly "enrolled"in the course;
    - **not started** – enrolled, but have not returned to course;
    - **lurker** – enrolled and has returned to the course once;
    - **passive** – enrolled and has accessed one material and participated in one discussion or submitted one assignment;
    - **active** – has accessed 50% of the materials and submitted 50% of the assignments or participated in 50% of the discussions;
    - **drop-ins** – enrolled, but active in one-two weeks only.
    - **drop-out** – enrolled but has left the course before to complete.

All the material described above must be considered as an integrating part of the pilot, and therefore they will be treated as "living" materials: this means that the single details and contents might be – in due time – revised, changed or deleted, depending on the results gained.

At the time of the preparation of this Deliverable, the following tasks have been completed:

- Definition of registration form (see attached in annex I the Registration form)
- Definition of expectation questionnaire for enrolled users (see attached in annex I the Expectation Questionnaires)
- Definition of expectation questionnaire for NOT enrolled people (see attached Expectations Questionnaire)
- Definition of exit questionnaire
- Definition of customized mini-survey (see attached in annex II)
- Google Analytics Account has been set
- Tracking technologies and learning analytics on Emma have been updated

2.1 User profile questionnaires

All the students with a valid registration into the EMMA platform will qualify as eligible samples, so no specific sampling method will be applied. The sample will therefore equal the totality of the universe or population for the survey. Since ASSET aims at raising awareness towards the energy transition urgency and considered the market need for new skills and competencies, questionnaires completion cannot be mandatory, but registration is required in order to access ASSET offer and facilities.

It is possible that in the initial phases of the pilot we intercept a consistent quantity of people who are only browsing the offer and are not returning to enrol: it is our intention to reach out to these "non enrolled" group with a specific set of questions (see attached "exit questionnaire for not enrolled"), which will detect the reasons why and the possible weaknesses of the offer. This will allow the partners to find out whether the lack of interest is linked to specific problems, the appeal of the platform or the whole offer, or any other reason.

Figure 1: Survey design

The registration form has been developed to collect a minimum demographic data as to profile each student per main variables. In order to share the same knowledge base, both the Asset Marketplace and the EMMA platforms provide the same request for registration. However, for the case of the Emma platform some topic-specific questions have been moved at level of expectation questionnaire. The duration of the registration (or entry) questionnaire is being kept minimal for recruitment purposes. It is quite vital, in fact, that the request of additional information do not interfere with the whole ASSET program, for example limiting the registration or enrolment in courses. Basic questions aimed at collecting descriptive data, such as gender, age, education, profession, etc. are presented very straightforwardly. The response expected is a single answer.

For the Expectations and Exit Questionnaire the use of a scale will enable us to measure an opinion (satisfaction in this specific case) to obtain a benchmark. The scales used are Likert-type based with fixed choice response formats designed to measure attitudes and/or opinions according to different levels of agreement/disagreement.

As per the EMMA and ASSET platform nature, the only collection tool made available to learners is the online collection. In order to ensure and guarantee the quality of collected data, it is worth mentioning that the tool used by UNINA is SurveyMonkey. A complete platform-as-service that supports the entire survey research lifecycle, from survey authoring to data collection to reporting. It enables us to control and enhance the most relevant aspects of the research process. However, it is important to remind that quantitative results of the recruitment campaign will not be treated as a measure of success (KPI, Key Performance Indicator), since the first launch represents a pilot for the ASSET project.

2.2 Data Processing and analysing

Data processing consists first of all in retrieving the raw data in the correct order and correctly linked so to allow the allocation of responses to the different tasks (Registration/ Entry Form + Expectations Questionnaire + Exit Questionnaire) to a sole and unique individual. This will then allow you to refer specific responses to a certain type of individual (e.g.: men vs women, younger vs older, etc…) and draw conclusions from the various descriptive features.

The continuous connection between descriptive data and opinions and information delivered does not at any stage mean that we are (or will be at any stage) able to reconnect the data to a specific individual and to his/her identity, according to the indication of GDPR.

Data processing is done by the UNINA team and released in a simple table. Text commentary will be produced to illustrate the main results and conclusions and insights will also be added. With the progress of the pilot and with the growing number of observations collected, some multivariate analyses might be applied in order to try and gain further insights into the data. Regression, just to make one example, can be used to estimate if a relation exists between the level of satisfaction and/or the willingness to enrol again in a MOOC or to be engaged in the community on energy transition at large.

The ASSET monitoring framework will comprise results coming from analysing the users' digital traces and the data collected with the questionnaires. During the pilot, the framework will have a circular feed in which actions and opinions will be analysed as a continuum, so that changes resulting from decisions taken after analysis will be implemented along with the development of the platform.

Clustering and grouping the learners based on their digital traces in EMMA platform will benefit from the "qualitative" contribution of the survey-based data. Among other results we expect that in time due - non-university-based learner profiles will enrich the scenario of the ASSET MOOCs educational offer programme. Also, some variables of the collected data of users' traces from platform might be used as cross-variable in the process of analysis and reporting, which is due periodically during the Pilot duration.

Other learnings can be obtained, for example, by:

- analysing the profile of different clusters to find out recurring patterns
- re-group learners out of clusters into variable-based groups (e.g. country of origin, educational background, …) to try and find out if and where there are attitudes or behaviours we can leverage on in view of further development of the ASSET offer.

2.3 Tracking and Analytics

The tracking system is strongly related to the code of the EMMA platform. It aims tracking what the user is doing on the web platform, in order to understand his behaviour and needs. In terms of data collected this means a set of data that has to be strongly analysed before to obtain a meaningful report on the user actions (Learning Analytics). The connection among tracking and learning analytics is well described in fig. 2.

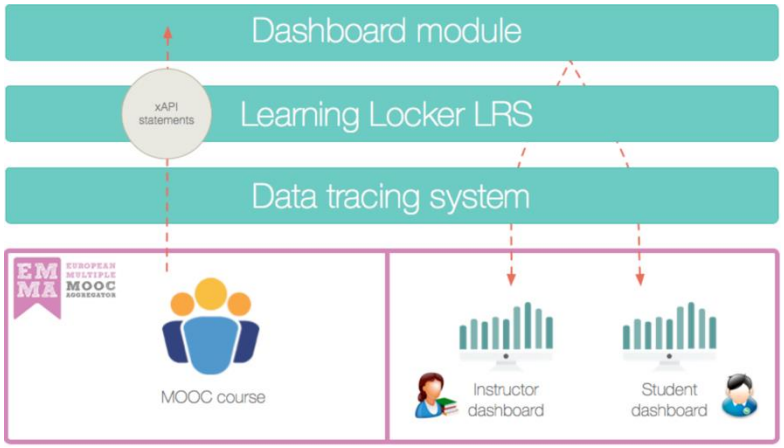

Figure 2: Tracking system and learning analytics dashboards

Learning Analytics technical application, which is integrated with EMMA platform, consists of learning record store (LRS) Learning Locker, which stores the xAPI statements that are used for developing dashboards. Learning Locker stored only learning experiences and not statements that created the structure of the course. The learning locker system data is protected with user/password.

Learning analytics provides the data and input for monitoring the ASSET MOOC operations in a quantitative perspective. In addition, questionnaires to be completed by the participants form an important part of the monitoring system to supplement the learning analytics mainly with qualitative insights. It is thus possible to achieve additional information about participants' real behaviour on the platform in addition to their own judgments provided via the questionnaires. Learning analytics methodology enables also to cluster the participants based on their patterns in their learning behaviour in the MOOCs and to approach them with relevant questions in the evaluation phase. So, both learning analytics and questionnaires are tools for measuring learning behaviour on the platform.

Learning analytics has been defined as "the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs". This definition had been set out at the 1st International Conference on Learning Analytics and Knowledge.

Learning Analytics methodology has two perspectives: real time and retrospective analytics. EMMA provides real-time learning dashboards for students and instructors for personal use, while retrospective analysis uses learning analytics within the MOOCs context to create a feedback loop on students' a) progress and performance, b) knowledge, c) social structures, d) engagement with the content.

In the first months of the ASSET project, the EMMA platform has been significantly optimized regarding both the Graphical User Interface as well as the implementation of new low-level functions. This had

an impact on the development of the Tracking System: in fact, during these months, the UNINA team operated in the direction of system upgrading, stored data cleaning and tracking optimization for performance effectiveness.

2.4 Progress and performance

Students' progress in ASSET MOOCs is measured in accordance with the course lessons. Each course consists of lessons that entail several units. Units consist of the materials, videos and assignments. Analytics will be performed based on following events:

accessed learning resources – learner has accessed to a number of materials in given module;

completed learning activities – learner has indicated that activity has been completed; activity is considered to be completed when learner submits an assignment; activity is also completed when assignment is graded and passed, when quiz has been passed and the expected learning goals had been achieved;

time spent on materials – for how long the student has read the learning resources, watched the videos, spent on the course in general;

grades and results – what level the learning activities have been performed. Progress will be visualized in the students' dashboards. Students can see their efforts during the whole course or within a module.

The uptake is mainly analysed based on the interactions in the conversation functionality. Posts, replies and comments in discussion board are also considered as the basis for social network analysis of the course participants and is used to visualize the groups of learners within the MOOCs that will be of interest for the MOOC providers and participants.

Social network and artefacts analysis will be performed in order to find out what kind of social structures emerge in the MOOC context and in which way the materials and resources mediate between the participants and what kind of networks emerge around the materials or artefacts.

To support the evaluation of the course design, access and use of the learning materials can be also evaluated. The intensity and frequency of the accessed learning materials will be provided to the MOOC instructors.

2.5 Google Analytics

Data coming from Google Analytics concerns the specific dimension of interaction with the platform. In the general overview, the following data are usually retrieved: i.e. the number and duration of the session and bounce rate, the type of traffic including referral, social networks, languages and geographical origin, number of visitors and so on. Each parameter identifies a clear quantitative dimension of analysis, as follows:

- SESSION is a group of interactions that take place on a website within a given time frame;
- PAGEVIEWS is the total number of pages people visited on a website;
- PAGE PER SESSION is the average number of pages viewed during a session;
- REFERRAL TRAFFIC is that generated by users who landed on EMMA by clicking on other websites (i.e. another site, a social media profile, or a search engine);
- DIRECT TRAFFIC: Direct traffic is made up of visitors that type a URL directly, click on a bookmark or links from documents that don't include tracking variables (such as PDFs or Word documents);
- BOUNCE RATE is the percentage of visitors to a particular website who navigate away from the site after viewing only one page;
- UNIQUE VISITOR is the number of unduplicated (counted only once) visitors to a website over the course of a specified time period;

- NEW VISITORS are users that have had at least one session within the selected date range;
- RETURNING VISITORS are those users that have visited a website before and are back again. Google has set a 2-year expiration date on New Visitors. If someone has visited a website within the past two years and returns from the same device, they are marked as a Returning Visitor.

Of course, Google Analytics can be used in a very strategic manner to monitor each action on a website, for any subpage or MOOC, and also for specific individuals or groups of individuals. However, data will be retrieved according to the general aim of monitoring the ASSET MOOC and to provide insights on emerging dimensions such as countries accessing more, page and specific MOOCs more visited, number of general visitors etc.

3. Monitoring deployment plan for ASSET MOOCs

The plan is to record basic profiling questions at the time of registration, to be stored on the UNINA server, and – via a unique ID string assigned to each individual – connect the answer to the Expectations questions.

At given points in the progress of the course the learners will receive an invitation to complete a questionnaire on their experience with the ASSET MOOCs.

As per the attached questionnaires the various types of outcome are covered so that we will be able to intercept the various groups / clusters:

- People only registered on EMMA and not enrolled
- People registered and enrolled in a MOOC, but dropped out before completion
- People registered and enrolled in a MOOC and who have completed the course

Progress within the platform will activate the delivery of the relevant questionnaire (see fig. 3), e.g.:

- the registration questionnaire with all the profiling variables will be activated automatically at the time of first access;
- the link to the expectation questionnaire will be sent to each learner when accessing the MOOC offer;
- the link to the exit questionnaire(s) will be sent at the time of completion, where "completion" will be defined as per the clustering description and/or any other types of group. Grouping of the participants will be based on analysis of digital traces of the learners' that will be used for analyzing the behavior in MOOC during the Pilot.
- Furthermore, a mini survey will be randomly submitted in order to focus on the needs of very specific target groups (ie: energy company workers e/o employees, teacher/tutors etc.).

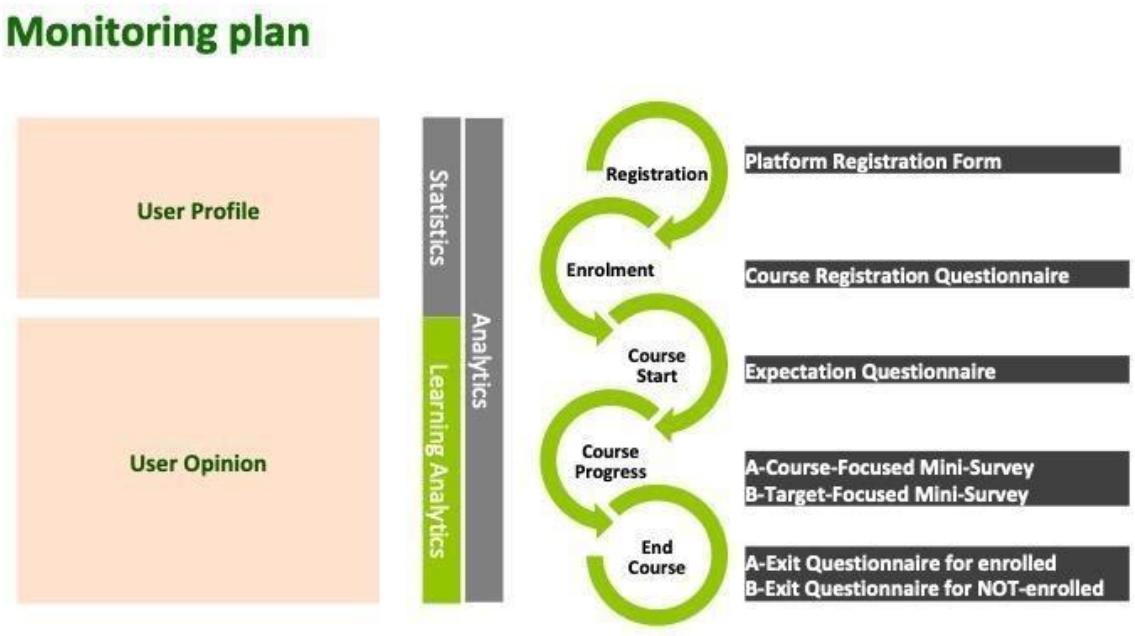

Figure 3: Interrelation among MOOC Progress and monitoring

3.1 Measurements to be collected

Testing and evaluating the methodology iteratively with several MOOCs will provide sufficient empirical ground for analysing the ASSET MOOC designs, completion rates and user behaviour in

course context. Results of the monitoring would be valuable input for the ASSET consortium to see the benefits and bottlenecks of new KSC creation in energy transition.

The first phase of the ASSET project should provide:

- different clusters of the MOOC participants based on their activity patterns and engagement with the content;
- an overview of the participants' progress during the course;
- social network analysis of the participants including the intensities of the networks and uptake of knowledge;
- analysis of engagement with the content - frequencies of using the materials in order to support the MOOC designs.
- satisfaction with the ASSET program
- The operational outcomes expected – as said above - can be of different nature and they can result in:
- actions for aligning the project to its users' needs
- actions to fine tune courses design
- actions to achieve higher rates of Enrolment, Retention (repeat enrolments), Completion.

In time, and based on repetition of collection and analysis, and also based on an expected growing number of observations, we can expect to produce theoretical contributions at different stages.

3.2 Tailoring monitoring tools to the face to face ASSET educational programmes

The rest ASSET offerings include courses in Universities, seminars and short-lab training.

To assess the face-to-face educational programmes that will take place in Universities throughout the project lifetime, ASSET will adopt the questionnaire approach. To this aim, it tailors the questionnaires provided for MOOC for the face-to-face educational programmes that will be delivered to students (see section 5 of Annex I)

To assess the face-to-face educational programmes that ASSET Universities will deliver in the form of seminars that same questionnaires as above will be provided to the attendants. Free discussion will also take place exploiting the experience of the attendants who will come from the industry.

To assess the lab training that will take place in Universities throughout the project lifetime, ASSET will adopt the interview approach as this is targeted to small groups of employees. The results will be delivered and reported in D4.4 Evaluation of ASSET educational proposition - v1.

4. Marketplace monitoring tools

To assess the attractiveness and usefulness of the ASSET marketplace, we will take two actions:

- Gather feedback from registered companies through unstructured interviews mainly with the three (external to ASSET) energy companies that will test the marketplace and be engaged to define an educational programme request. This will happen in the 2nd year of the project when this activity will take place.
- Integrate the Google Analytics tool with the ASSET marketplace which has been developed using DRUPAL framework. This is a software tool that traces the sessions established between every page and user which will allow us to check which pages were more interesting to them, the geographical coverage of the users, whether they visited again the marketplace which reflects engagement, etc.

The integration of Google analytics with DRUPAL will happen under task 2.4 Monitoring tools in ASSET.

5. Conclusions

This deliverable provided an overview of the theoretical background on collection, analysis and reporting of data voluntarily relayed by users in their experience with the MOOC platform and the ASSET marketplace. On the one hand monitoring tools for the Emma Platform, MOOCs in general and the face to face ASSET educational programmes were detailed. On the other hand, monitoring tools for the marketplace hosted by the ASSET website were described. Based on such tools, both UNINA and OTEA as well as concerning partners will be able to monitor and profile the visits of the ecosystem members and external visitors identifying those indicators that will help to assess project results.

ANNEX 1: Questionnaires

1. Registration questionnaire
2. Expectation questionnaire
3. Exit questionnaire (ENROLLED VERSION)
4. Exit questionnaire (NON-ENROLLED VERSION)
5. Questionnaires for face to face courses
6. Questionnaire for Blended course

A. MOOC registration questionnaire (mandatory, *an answer is expected)

1. Name*: _____

2. Surname*: _____

3. Email address*: _____

4. Gender:

F ☐

M ☐

5. Age group:

<14 ☐

15-24 ☐

25-34 ☐

35-44 ☐

45-64 ☐

>65 ☐

6. Country*:

(list of countries)_____

7. Job position: (list of job positions, single choice)

Business owner/entrepreneur ☐

Registered freelance professional ☐

Company director/CEO ☐

Office Worker ☐

Middle manager ☐

Storekeeper/tradesman/craftsman ☐

Manual worker/Agricultural worker/Farmer ☐

Other self-employed workers ☐

Teacher/lecturer upper education/university	☐
Teacher/lecturer lower/primary education	☐
Student	☐
Housewife/houseman	☐
Retired	☐
Unemployed	☐
Researcher	☐
Prefer not to state	☐

8. Education qualification*:

Student	☐
Diploma	☐
University degree	☐
PhD/other)	☐

9. Company/organisation: _____

10. Which are your specific fields of interest *related to the energy transition process*: (you can choose more than one):*

☐	renewable energy	☐	economic aspects
☐	energy storage	☐	smart and flexible energy systems
☐	energy efficiency	☐	carbon capture, utilisation and storage (CCUS)
☐	climate change	☐	social aspects
☐	energy communities	☐	policy/regulatory aspects
☐	environmental aspects	☐	sustainability aspects
☐	Other _____ ____	☐	

11. In which group do you identify yourself*?

(in case the answer is "other", please type a short description)

☐	Research & education
☐	Companies from the energy sector
☐	Policy bodies
☐	Societal actors
☐	Energy citizens
☐	Individuals

☐	Other

12. ASSET courses are currently available in English.

1. Does this constitute a barrier for you YES ☐ NO ☐
2. Is there any other language you would consider using? [list of languages]

13. Do you want to receive the ASSET project Newsletter*?

☐ YES

☐ NO

DISCLAIMER:

Data will only be available and accessible for all ASSET project members for its use during the project lifetime and we will not transfer it to any third party outside the project. We will NOT use your personal information for any other purpose.

We will store your data in the project repository during the project life + 5 years for auditing purposes.

You have the right to correct your personal information and the right to cancel your subscription at any time. We have put in place security systems designed to prevent unauthorized access to or disclosure of the personal information you provide, and we take all reasonable steps to secure and safeguard this information. You may contact us for any reason at: info@energytransition.academy

B. MOOC Expectations questionnaire (not mandatory)

Thank you for taking the time to complete this ASSET Expectations questionnaire.

We would like to know more about the means, intentions and expectations you attach to your enrolling in the ASSET MOOCs. The survey should only take about 5 minutes to complete.

This short survey is NOT mandatory, but we appreciate your effort in completing it. At the end of this survey you will find a link for coming back to EMMA. For more information about how your answers will be used and stored, please take a look at our Privacy Policy

1. First of all, how did you hear about the ASSET educational offer? **(multiple choice)**

1. University – professor ☐
2. University – fellow student ☐
3. University – materials (leaflets, posters, …) ☐
4. Colleague(s) at work ☐
5. Friend(s) ☐
6. Twitter ☐
7. Facebook ☐
8. Other social networks ☐
9. Blog ☐
10. Read an article on paper ☐
11. Read an article online ☐
12. Congress/convention/fair ☐
13. Other_____

2. Have you had any previous experience with MOOCs?

☐ YES

☐ NO

IF YES

2b What is your overall level of satisfaction with MOOCs so far?

1. Very satisfied ☐
2. Fairly satisfied ☐
3. Fairly unsatisfied ☐
4. Very unsatisfied ☐

3. What are the reasons you decided to register at ASSET MOOC offer?

1. Curiosity – to get an idea on ENERGY TRANSITION ☐
2. Curiosity – browse the offer ☐
3. Curiosity– check if MOOCs might respond to my current needs ☐

4. Curiosity - find out more about new educational pedagogies ☐
5. Experience – to know how a MOOC on ENERGY TRANSITION looks like ☐
6. Experience – try my first MOOC in ENERGY TRANSITION ☐
7. Experience – gain advanced knowledge in ENERGY TRANSITION ☐
8. Experience – gain first knowledge in ENERGY TRANSITION ☐
9. Experience – refresh my knowledge in ENERGY TRANSITION ☐
10. Experience - look for a particular skill/competence ☐
11. Experience – improve my competences ☐
12. Experience – acquire new skills ☐
13. Certification – look for badge/credit/certification ☐
14. Certification – improve my professional portfolio ☐
15. Certification – increase my job opportunities ☐
16. Certification – improve my professional career ☐
17. Other ☐

4. Are you interested in a specific course or in a combination of courses?

1. I intend to/I believe I would focus on a single course ☐
2. I intend to/I believe I would go for a combination of courses ☐
3. I do not know yet, will decide later ☐

5.Please rate from "strongly dislike" to "strongly like" how you would like to learn about Energy Transition (Please select one option for each row.)

	Strongly like	**Like**	**Neutral**	**Dislike**	**Strongly dislike**
By reading text	1	2	3	4	5
By watching videos	1	2	3	4	5
By reading comments posted by other learners	1	2	3	4	5
By discussing things online with other learners	1	2	3	4	5
By discussing things online with teacher/tutor	1	2	3	4	5
By doing quizzes or other assignments and getting feedback	1	2	3	4	5

6.Which of the following aspects are you interested in? (Please tick all that apply.)

1. Engineering and technical ☐
2. Environmental ☐
3. Societal ☐
4. Economic ☐
5. Managerial ☐
6. Organizational ☐
7. Other ☐

7.MOOC duration is measured in weeks. How many weeks would you be willing to invest as a minimum and maximum option

Min:__	Max:__

8.In which of the following ASSET courses do you wish to enrol?

1. An Introduction to AC Microgrids for Energy Control and Management ☐
2. An Introduction to DC Microgrids for Energy Control and Management ☐
3. Optimization Strategies and Energy Management Systems ☐
4. Maritime Microgrids – A Sustainable Solution for Green Sea Transportation ☐
5. Power Quality Challenges and solution for Microgrids ☐
6. Challenges and solutions in Future Power Networks ☐
7. Innovation and Diversity in Engineering ☐
8. Renewable Energy Technologies ☐
9. Electric heat pumps in the energy transition framework ☐
10. Green professionalization and ethics ☐
11. Corporate Communication and Corporate Social Responsibility ☐
12. A holistic approach for Energy Transition: territory, networks and sustainability ☐
13. New Materials for solar cells applications ☐
14. Energy and environment ☐
15. Hydrogen as Energy Vector ☐
16. Train the trainer ☐
17. Energy Efficient and Ecological Design of Products and Equipment ☐

9.Which will be the main location from which you will connect to EMMA? (multiple choice)

1. Home ☐
2. University ☐
3. Workplace ☐
4. Public library ☐

5. Internet Café ☐
6. Outdoor hotspot ☐
7. Other ☐

10.Which would your device of choice be? **(multiple choice)**

1. Desktop ☐
2. Laptop ☐
3. Tablet ☐
4. Mobile phone ☐
5. Other ☐

Now we need just few information about you

11.If you have a secondary education or more (university or doctorate level) What is/was your main field of studies?

1. Education ☐
2. Humanities and Arts ☐
3. Social sciences, business and law ☐
4. Science (ex. Mathematics, Statistics, Natural science, Physics…) ☐
5. ICTs (Information and Communication Technology, computer science...) ☐
6. Engineering, manufacturing and construction ☐
7. Agriculture and Veterinary ☐
8. Health and welfare ☐
9. Other (not classified) ☐

12.Which is your employment status?

1. Working full time ☐
2. Working part time ☐
3. Temporary work ☐
4. Looking for a first-time job ☐
5. Looking for a job ☐
6. In full time education ☐
7. Retired ☐
8. Other “don’t work” ☐

13.If you have a job in Energy Transition, please specify in which sector

1. Manufacturing industry (i.e., assembling & installing industries, R&D, etc.) ☐
2. Energy production (i.e., energy supplier) ☐
3. Consumption (i.e., an association of consumers) ☐
4. Environment sector (i.e., environment association, grassroots movement, etc.) ☐
5. Education agency (i.e., schools, universities, etc.) ☐

6. Regulatory/infrastructure agency (i.e., transmission system operator) ☐
7. Policy body (i.e., municipalities, Ministers, etc.) ☐
8. Other ☐

14.Considering the sector in which you are directly involved (public administrations, a private company, trade union, etc.), what skills do you expect to acquire? Maximum 3 answers for each list (hard/soft skills).

Hard skills		***Soft skill***	
Language knowledge		Communication skills	
Degree, certifications (specific for each sector)		Adaptability /creativity	
Accounting		Decision-making	
Logistic		Problem-solving	
Machine operation		Team-working	
Software knowledge		Networking/intermediation	
Digital skills		Learn to learn	
Local context analysis		Time management skills	
Big Data analysis		Awareness of territorial contexts	
Management		Conflict resolution	
Other:		Other:	
Other:		Other:	
Other:		Other:	

15.How would you rate your knowledge in the Energy Transition field

1. Extremely high ☐
2. Fairly high ☐
3. Neither high nor low ☐
4. Fairly low ☐
5. Extremely low ☐

DISCLAIMER:

Data will only be available and accessible for all ASSET project members for its use during the project lifetime and we will not transfer it to any third party outside the project. We will NOT use your personal information for any other purpose.

We will store your data in the project repository during the project life + 5 years for auditing purposes.

You have the right to correct your personal information and the right to cancel your subscription at any time.

We have put in place security systems designed to prevent unauthorized access to or disclosure of the personal information you provide, and we take all reasonable steps to secure and safeguard this information. You may contact us for any reason at: info@energytransition.academy

Thank you for your cooperation! Click on the button below to complete your registration: you will be automatically re-directed to the EMMA platform.

C. MOOC exit questionnaire (enrolled)

Thank you for taking the time to complete the ASSET MOOC survey. We attach a lot of importance to all of our learner opinions and experience with the ASSET MOOC programme to keep improving our courses on Energy Transition. The survey should only take about 5 minutes to complete. For more information about how your answers will be used and stored, please take a look at our Privacy Policy

1.First of all, have you already completed your course?

- YES, completed it ☐
- NO, but I will definitely complete it ☐
- NO, and I don't think I will complete it ☐

IF "NO, and I don't think I will complete it" ASK Q2

2.Which of the following best describes the reason why you have not completed the course? (Multiple choice)

1. Topic did not meet expectations ☐
2. Materials did not meet expectations ☐
3. Perception of low quality delivered ☐
4. Wasn't proficient enough in the language(s) the MOOC was available in ☐
5. Course was too easy/didn't add to my knowledge ☐
6. Course was too difficult/didn't have enough background knowledge ☐
7. Too much time required ☐
8. What I found did not match the course presentation ☐
9. Never intended to complete it/when found what I needed, I quit ☐
10. Never intended to complete it/did it just out of curiosity ☐
11. Could not find my way around the course ☐
12. Could not find my way around the platform ☐
13. Personal issues ☐
14. Other (OPEN) ☐

3. How much would you agree with the following statements about the MOOC you have followed? Again, please use the agree – disagree scale

	Completely agree	**Fairly agree**	**Neither agree nor disagree**	**Fairly disagree**	**Completely disagree**
It's engaging	1	2	3	4	5
It's comprehensive	1	2	3	4	5
It's authoritative	1	2	3	4	5
It's exhaustive	1	2	3	4	5
It offers a multidisciplinary perspective	1	2	3	4	5
It offers flexibility in learning paths	1	2	3	4	5

It's innovative	1	2	3	4	5
It's useful	1	2	3	4	5
It's complementary to acquired knowledge	1	2	3	4	5
It's preparatory for an in-depth education	1	2	3	4	5

4. Let's now go into the MOOC you have enrolled in. Which one of the following was it?

1. An Introduction to AC Microgrids for Energy Control and Management ☐
2. An Introduction to DC Microgrids for Energy Control and Management ☐
3. Optimization Strategies and Energy Management Systems ☐
4. Maritime Microgrids – A Sustainable Solution for Green Sea Transportation ☐
5. Power Quality Challenges and solution for Microgrids ☐
6. Challenges and solutions in Future Power Networks ☐
7. Innovation and Diversity in Engineering ☐
8. Renewable Energy Technologies ☐
9. Electric heat pumps in the energy transition framework ☐
10. Green professionalization and ethics ☐
11. Corporate Communication and Corporate Social Responsibility ☐
12. A holistic approach for Energy Transition: territory, networks and sustainability ☐
13. New Materials for solar cells applications ☐
14. Energy and environment ☐
15. Hydrogen as Energy Vector ☐
16. Train the trainer ☐
17. Energy Efficient and Ecological Design of Products and Equipment ☐

5.How much do you agree or disagree with the following statements about your course?

	Completely agree	**Fairly agree**	**Neither agree nor disagree**	**Fairly disagree**	**Completely disagree**
It was up to my overall expectations	1	2	3	4	5
I enjoyed the experience	1	2	3	4	5
I felt engaged	1	2	3	4	5
I felt challenged	1	2	3	4	5
It was easy to follow	1	2	3	4	5
It was something new from previous learning experience I've had	1	2	3	4	5
It was well organized	1	2	3	4	5
It was truly formative	1	2	3	4	5

It helps me to complement my previous knowledge into the field	1	2	3	4	5

6. How much do you agree or disagree with the following statements about the materials offered?

	Completely agree	**Fairly agree**	**Neither agree nor disagree**	**Fairly disagree**	**Completely disagree**
They were up to date	1	2	3	4	5
They were offered in the right quantity	1	2	3	4	5
They were quite poor in quality	1	2	3	4	5
They were not appropriate for a MOOC-style course	1	2	3	4	5
Their style matched my expectations	1	2	3	4	5
They were quite difficult to understand	1	2	3	4	5

7.What about the quantity of tasks and assignments which were requested to you? Did you find that…?

1.There were too many ☐

2. It was just the right amount ☐

3. There were too few ☐

8.How much do you agree or disagree with the following statements about tasks, assignments, and quizzes included in the course?

	Completely agree	**Fairly agree**	**Neither agree nor disagree**	**Fairly disagree**	**Completely disagree**
It was a good way to experience the course	1	2	3	4	5
It is a too much time-consuming activity	1	2	3	4	5
I believe in their educational function	1	2	3	4	5
It's a good opportunity for self-assessment	1	2	3	4	5
It's engaging	1	2	3	4	5

9.How much do you agree or disagree with the following statements about the interactive functions (conversation/chat/blog/) available for the MOOC?

	Completely agree	Fairly agree	Neither agree nor disagree	Fairly disagree	Completely disagree
They have been little used	1	2	3	4	5
They have been used in a productive way	1	2	3	4	5
They have been used to engage learners	1	2	3	4	5
They have been used to connect learners with the relevant people	1	2	3	4	5
They have been used to help learners to reflect	1	2	3	4	5
They have been used to explore new arguments	1	2	3	4	5
They have been used to questioning the topic	1	2	3	4	5

10. How much do you agree or disagree with the following statements about the videos offered?

	Completely agree	Fairly agree	Neither agree nor disagree	Fairly disagree	Completely disagree
They are good quality	1	2	3	4	5
They enhance the overall value of the course	1	2	3	4	5
I like the format	1	2	3	4	5
Videos are too short	1	2	3	4	5
Videos are effective	1	2	3	4	5
Videos are truly formative	1	2	3	4	5
Video are only introductory	1	2	3	4	5

11.All in all, how would you rate your experience with this MOOC?

1. Extremely good ☐
2. Fairly good ☐
3. Neither good nor bad ☐
4. Fairly bad ☐
5. Extremely bad ☐

12.Is there a course within the current ASSET program which you would like to enrol in, in the near future?

1. An Introduction to AC Microgrids for Energy Control and Management ☐
2. An Introduction to DC Microgrids for Energy Control and Management ☐
3. Optimization Strategies and Energy Management Systems ☐
4. Maritime Microgrids – A Sustainable Solution for Green Sea Transportation ☐
5. Power Quality Challenges and solution for Microgrids ☐

6. Challenges and solutions in Future Power Networks ☐
7. Innovation and Diversity in Engineering ☐
8. Renewable Energy Technologies ☐
9. Electric heat pumps in the energy transition framework ☐
10. Green professionalization and ethics ☐
11. Corporate Communication and Corporate Social Responsibility ☐
12. A holistic approach for Energy Transition: territory, networks and sustainability ☐
13. New Materials for solar cells applications ☐
14. Energy and environment ☐
15. Hydrogen as Energy Vector ☐
16. Train the trainer ☐
17. Energy Efficient and Ecological Design of Products and Equipment ☐

13.Is there a topic related to ENERGY TRANSITION which is not currently available on EMMA and of which you would like a course to be offered in the future?

NO ☐

YES ☐ *Please name it* _____

14 How much do you agree or disagree with the following statements about the whole ASSET program on ENERGY TRANSITION offered on EMMA?

	Completely agree	**Fairly agree**	**Neither agree nor disagree**	**Fairly disagree**	**Completely disagree**
It is quite wide	1	2	3	4	5
It is too close to engineering	1	2	3	4	5
It should be more focused on technical aspects	1	2	3	4	5
It should be more focused on environmental issues	1	2	3	4	5
It should be more focused on societal challenges	1	2	3	4	5
It should be more focused on economic issues	1	2	3	4	5

15.About the EMMA platform, how would you rate it?

	Completely agree	**Fairly agree**	**Neither agree nor disagree**	**Fairly disagree**	**Completely disagree**
It is easy to understand how to navigate it	1	2	3	4	5
The main functions are clear and immediate	1	2	3	4	5

The response time when uploading content was adequate	1	2	3	4	5
The visual is appealing	1	2	3	4	5
The interaction features are easy to find and to use	1	2	3	4	5

THANK YOU FOR YOUR TIME!

D. MOOC exit questionnaire (not enrolled)

Thank you for taking the time to complete this ASSET survey.
This survey is not mandatory for completing any type of process throughout the EMMA platform, nor it will influence your possibility of re-entering EMMA and taking another course. However, we attach a lot of importance to all of our visitors' opinions and experience with an ASSET MOOCs, to keep improving our courses.

The survey should only take about 2 minutes to complete. For more information about how your answers will be used and stored, please take a look at our Privacy Policy. We thank you in advance for helping us to improve ASSET and making it closer to the learners' needs.

1. First of all, which of the following options best describes your intentions for registering on EMMA? Please select your main intention

1. I wanted to get a general idea of EMMA ☐
2. I wanted to get a general idea of the ASSET MOOC offer ☐
3. I wanted to get a general idea of how a MOOC works ☐
4. Other ☐

2. Which of the following options best describes the reason why you have NOT enrolled in a MOOC? You can select more than one

1. I never intended to, in the first instance ☐
2. I didn't find anything interesting enough ☐
3. I didn't find a subject I was really keen to study ☐
4. The courses proposed were too long ☐
5. The timelines proposed did not fit with my personal calendar ☐
6. I found the presentation not engaging enough ☐
7. I just registered onto the platform and then forgot about it ☐
8. Topic did not meet my expectations ☐
9. Perception of low quality delivered ☐
10. Wasn't proficient enough in the language(s) the MOOC was available in ☐
11. Course was too easy/didn't add to my knowledge ☐
12. Course was too difficult/didn't have enough background knowledge ☐
13. Too much time required ☐
14. Could not find my way around the course ☐
15. Could not find my way around the platform ☐
16. Personal issue ☐
17. Other ☐

3. If you were interested in an ASSET MOOC on Energy Transition, can you tell us what were your expectations?

1. More introductory level courses ☐
2. More intermediate level courses ☐
3. More advanced level courses ☐
4. More interdisciplinary courses ☐

5. Different approaches to energy transition ☐
6. Courses available in different languages than English ☐
7. Courses more focused on societal challenges ☐
8. Courses more focused on technical issues ☐
9. Courses more focused on environmental questions ☐
10. Courses more focused on economics and management ☐
11. Course more focused on transversal skills and competences, such as ☐
12. Other ☐

4. If you are still interested in Energy Transition, would you like to be informed about the ASSET initiatives?

1. Definitely yes, please include my email address in your communication and newsletter

_____

2. Definitely not

E. Questionnaire for face to face courses (* an answer is expected)

The following questionnaire will be distributed to the students of the ASSET short programmes.

1. Name*: _____

2. Surname*: _____

3. Email address*: _____

4. Gender:

F ☐

M ☐

5. Age group:

<14 ☐

15-24 ☐

25-34 ☐

35-44 ☐

45-64 ☐

>65 ☐

6. Country*:

(list of countries)_____

7. Education level *:

Undergraduate ☐

Master ☐

PhD ☐

8. Which are your specific fields of interest related to the energy transition process*: (you can choose more than one):

☐ renewable energy ☐ economic aspects

☐ energy storage ☐ smart and flexible energy systems

☐ energy efficiency ☐ carbon capture, utilisation and storage (CCUS)

☐ climate change ☐ social aspects

☐ energy communities ☐ policy/regulatory aspects

☐ environmental aspects ☐ sustainability aspects

☐ Other _____ ☐

9.Please rate from "strongly dislike" to "strongly like" how you would like to learn about Energy Transition (Please select one option for each row.)

	1.Strongly like	2.Like	3.Neutral	4.Dislike	5.Strongly dislike
By reading text	1	2	3	4	5
By watching videos	1	2	3	4	5
By reading comments posted by other learners	1	2	3	4	5

By discussing things online with other learners	1	2	3	4	5
By discussing things online with teacher/tutor	1	2	3	4	5
By doing quizzes or other assignments and getting feedback	1	2	3	4	5

10. Which of the following aspects are you interested in? (Please tick all that apply.)

1. engineering and technical ☐
2. environmental ☐
3. societal ☐
4. economic ☐
5. managerial ☐
6. organizational ☐
7. other ☐

11. Which of the following ASSET Courses would be interesting for you (select 5)?

1. An Introduction to AC Microgrids for Energy Control and Management
2. An Introduction to DC Microgrids for Energy Control and Management
3. Optimization Strategies and Energy Management Systems
4. Maritime Microgrids – A Sustainable Solution for Green Sea Transportation
5. Power Quality Challenges and solution for Microgrids
6. Challenges and solutions in Future Power Networks
7. Innovation and Diversity in Engineering
8. Renewable Energy Technologies
9. Electric heat pumps in the energy transition framework
10. Green professionalization and ethics
11. Corporate Communication and Corporate Social Responsibility
12. A holistic approach for Energy Transition: territory, networks and sustainability
13. New Materials for solar cells applications
14. Energy and environment
15. Hydrogen as Energy Vector
16. Train the trainer
17. Energy Efficient and Ecological Design of Products and Equipment

12. How would you consider your knowledge in the Energy Transition field?

1. Extremely high ☐
2. Fairly high ☐
3. Neither high, nor low ☐
4. Fairly low ☐
5. Extremely low ☐

13. How much would you agree with the following statements about the course you have followed? Again, please use the agree – disagree scale

1.Completely agree 2.Fairly agree 3.Neither agree nor disagree 4.Fairly disagree 5.Completely disagree

It's engaging	1	2	3	4	5
It's comprehensive	1	2	3	4	5
It's authoritative	1	2	3	4	5
It's exhaustive	1	2	3	4	5
It offers a multidisciplinary perspective	1	2	3	4	5
It offers flexibility in learning paths	1	2	3	4	5
It's innovative	1	2	3	4	5
It's useful	1	2	3	4	5
It's complementary to acquired knowledge	1	2	3	4	5
It's preparatory for an in-depth education	1	2	3	4	5

14. Let's now go into the course you have followed. Which one of the following was it?

1. An Introduction to AC Microgrids for Energy Control and Management ☐
2. An Introduction to DC Microgrids for Energy Control and Management ☐
3. Optimization Strategies and Energy Management Systems ☐
4. Maritime Microgrids – A Sustainable Solution for Green Sea Transportation ☐
5. Power Quality Challenges and solution for Microgrids ☐
6. Challenges and solutions in Future Power Networks ☐
7. Innovation and Diversity in Engineering ☐
8. Renewable Energy Technologies ☐
9. Electric heat pumps in the energy transition framework ☐
10. Green professionalization and ethics ☐
11. Corporate Communication and Corporate Social Responsibility ☐
12. A holistic approach for Energy Transition: territory, networks and sustainability ☐
13. New Materials for solar cells applications ☐
14. Energy and environment ☐
15. Hydrogen as Energy Vector ☐
16. Train the trainer ☐
17. Energy Efficient and Ecological Design of Products and Equipment ☐

15. How much do you agree or disagree with the following statements about your course?

1.Completely agree 2.Fairly agree 3.Neither agree nor disagree 4.Fairly disagree 5.Completely disagree

It was up to my overall expectations	1	2	3	4	5
I enjoyed the experience	1	2	3	4	5
I felt engaged	1	2	3	4	5
I felt challenged	1	2	3	4	5
It was easy to follow	1	2	3	4	5
It was something new from previous learning experience I've had	1	2	3	4	5
It was well organized	1	2	3	4	5
It was truly formative	1	2	3	4	5
It helps me to complement my previous knowledge into the field	1	2	3	4	5

16. How much do you agree or disagree with the following statements about the materials offered?

1.Completely agree 2.Fairly agree 3.Neither agree nor disagree 4.Fairly disagree 5.Completely disagree

They were up to date	1	2	3	4	5
They were offered in the right quantity	1	2	3	4	5
They were quite poor inequality	1	2	3	4	5
They were not appropriate for a face-to-face-style course	1	2	3	4	5
Their style matched my expectations	1	2	3	4	5
They were quite difficult to understand	1	2	3	4	5

17. What about the quantity of the task and assignments which were requested to you? Did you find that …?

1. There were too many ☐
2. It was just the right amount ☐
3. There were too few ☐

18. How much do you agree or disagree with the following statements about tasks, assignments, and quizzes which were requested

1.Completely agree 2.Fairly agree 3.Neither agree nor disagree 4.Fairly disagree 5.Completely disagree

It was a good way to experience the course	1	2	3	4	5
It is a too much time-consuming activity	1	2	3	4	5
I believe in their educational function	1	2	3	4	5
It's a good opportunity for self-assessment	1	2	3	4	5
It's engaging	1	2	3	4	5

19. All in all, how would you rate your experience with this short programme?

11. Extremely good ☐
12. Fairly good ☐
13. Neither good, nor bad ☐
14. Fairly bad ☐
15. Extremely bad ☐

20. Is there a course within the current ASSET program which you would like to enrol into, in the near future?

1. An Introduction to AC Microgrids for Energy Control and Management ☐
2. An Introduction to DC Microgrids for Energy Control and Management ☐
3. Optimization Strategies and Energy Management Systems ☐
4. Maritime Microgrids – A Sustainable Solution for Green Sea Transportation ☐
5. Power Quality Challenges and solution for Microgrids ☐
6. Challenges and solutions in Future Power Networks ☐
7. Innovation and Diversity in Engineering ☐

8. Renewable Energy Technologies ☐
9. Electric heat pumps in the energy transition framework ☐
10. Green professionalization and ethics ☐
11. Corporate Communication and Corporate Social Responsibility ☐
12. An Holistic Approach for Energy Transition: territory, networks and sustainability ☐
13. New Materials for solar cells applications ☐
14. Energy and environment ☐
15. Hydrogen as Energy Vector ☐
16. Train the trainer ☐
17. Energy Efficient and Ecological Design of Products and Equipment ☐

21. Is there a topic related to ENERGY TRANSITION which is not currently available on EMMA, and of which you would like a course to be offered in the future?

NO ☐

YES ☐

22. How much do you agree or disagree with the following statements about the whole ASSET program on ENERGY TRANSITION offered on EMMA?

Completely agree	Fairly agree	Neither agree nor disagree	Fairly disagree	Completely disagree
It is quite wide	1	2	3	4	5
It is too close to engineering	1	2	3	4	5
It should be more focused on technical aspects	1	2	3	4	5
It should be more focused on environmental issues	1	2	3	4	5
It should be more focused on societal challenges	1	2	3	4	5
It should be more focused on economic issues	1	2	3	4	5

23. If you were interested in an ASSET MOOC on Energy Transition, can you tell us what would be your expectations?

1. More introductory level courses ☐
2. More intermediate level courses ☐
3. More advanced level courses ☐
4. More interdisciplinary courses ☐
5. Different approaches to energy transition ☐
6. Courses available in different languages than English ☐
7. Courses more focused on societal challenges ☐
8. Courses more focused on technical issues ☐
9. Courses more focused on environmental questions ☐
10. Courses more focused on economics and management ☐
11. Course more focused on transversal skills and competences, such as

_____

12. Other _____

24. If you are still interested in Energy Transition, would you like to be informed about the ASSET initiatives?

a. Definitely yes, please include my email address in your communication and newsletter

_____

b. Definitely not

25. Please rate from "strongly like" to "strongly dislike" how you would rate your experience with the course (Insert title)

1 STRONGLY LIKE - 2 LIKE - 3 NEUTRAL - 4 DISLIKE - 5 STRONGLY DISLIKE

26. Please name the strongest aspect of this course and explain why

_____ why _____

27. Please name the weakest aspect of this course and explain why

_____ *why* _____

28. Please rate from "very much" to "very little", how much do you think you have learned from the course

1 VERY MUCH - 2 MUCH - 3 NEUTRAL - 4 NOT MUCH - 5 VERY LITTLE

29. Would you recommend this course to friends? Please rate from "absolutely yes" to "absolutely not"

1 ABSOLUTELY YES - 2 YES - 3 NEUTRAL - 4 NOT - 5 ABSOLUTELY NOT

DISCLAIMER:

Data will only be available and accessible for all ASSET project members for its use during the project lifetime and we will not transfer it to any third party outside the project. We will NOT use your personal information for any other purpose.

We will store your data in the project repository during the project life + 5 years for auditing purposes.

You have the right to correct your personal information and the right to cancel your subscription at any time. We have put in place security systems designed to prevent unauthorized access to or disclosure of the personal information you provide, and we take all reasonable steps to secure and safeguard this information. You may contact us for any reason at: info@energytransition.academy

F. Questionnaire for blended classes

1. ***Age***
2. ***Gender*** ***M*** ☐ ***F*** ☐

3. ***Class of*** _____

4. ***Degree level***_____

5. ***Title of the MOOC used for your blended class***

   _____

6. ***Have you followed other MOOCs in the past?***

   YES NO

7. ***How much do you agree or disagree with the following statements about your course?***

	Completely agree	Fairly agree	Neither agree nor disagree	Fairly disagree	Completely disagree
It was up to my overall expectations	1	2	3	4	5
I enjoyed the experience	1	2	3	4	5
I felt engaged	1	2	3	4	5
I felt challenged	1	2	3	4	5
It was easy to follow	1	2	3	4	5
It was something new from previous learning experience I've had	1	2	3	4	5
It was well organized	1	2	3	4	5
It was truly formative	1	2	3	4	5
It helps me to complement my previous knowledge into the field	1	2	3	4	5

8. ***On a scale from 1 (low) to 5 (high), can you rate each of the following statements:***

The MOOC is a useful tool for:

- Replacing traditional teaching (**Studying**) 1 – 2 – 3 – 4 - 5
- Helping in the study of traditional teaching (**Supporting**) 1 – 2 – 3 – 4 - 5
- Getting a first idea, before engaging in more demanding studies (**Orienting**) 1 – 2 – 3 – 4 - 5
- Integrating my knowledge (**Completing** 1 – 2 – 3 – 4 - 5
- Committing time to explore new horizons and satisfy your curiosity (**Discovering**) 1 – 2 – 3 – 4 –5

9. ***Any other suggestion?*** _____

10. ***After this experience, do you plan to follow other MOOCs?***

YES NO I DON'T KNOW

11. In the course you have followed, how important was the presence of the teacher?

1.We could have done well even on our own ☐

2.Important, but not decisive ☐

3.Quite important, as a supporting function ☐

4.Very important, as a guide and for content integration ☐

12. What did you like about the blended classroom approach

1.The autonomy of students ☐

2.The empowerment of students ☐

3.Self-organizing activities ☐

4.The approach to critical thinking ☐

5.The use of creativity ☐

6.Other _____

13. On a scale from 1 (low) to 5 (high), what do you think about the following statements about the teacher role

1.He/she loses his/her centrality 1 – 2 – 3 – 4 - 5

2.He/she performs only an integrative function 1 – 2 – 3 – 4 - 5

3.He/she uses materials produced by others 1 – 2 – 3 – 4 - 5

4.He/she leaves students to act 1 – 2 – 3 – 4 - 5

5.He/she interacts with students 1 – 2 – 3 – 4 - 5

6.Other……..

14. Did you worked on a practical case or project during your class?

YES NO

14b. If YES, How relevant it was for your learning?

Not at all - Little relevant - Enough relevant - relevant - Very relevant

15. With the blended approach, do you think you've learned:

1.In the same way as a traditional course ☐

2.Less than a traditional course ☐

3.More than a traditional course ☐

16. All in all, how would you rate your experience with this MOOC?

1.Extremely good ☐

2.Fairly good ☐

3.Neither good nor bad ☐

4.Fairly bad ☐

5.Extremely bad ☐

ANNEX 2: Mini surveys

1. Mini Survey for course quality
2. Mini Survey targeting energy company workers
3. Mini Survey targeting teacher/tutors
4. Mini Survey targeting women

A. Mini survey for course quality monitoring

1. ***Please rate from "strongly like" to "strongly dislike" your experience with the MOOC (Insert title)***

1 STRONGLY LIKE - 2 LIKE - 3 NEUTRAL - 4 DISLIKE - 5 STRONGLY DISLIKE

2. ***Please name the strongest aspect of this course and explain why***

   _____

   why _____

3. ***Please name the weakest aspect of this course and explain why***

   _____

   why _____

4. ***Please rate from "very much" to "very little", how much you have learned from the course***

1 VERY MUCH - 2 MUCH - 3 NEUTRAL - 4 NOT MUCH - 5 VERY LITTLE

5. ***Would you recommend this course to your friends? Please rate from "absolutely yes" to "absolutely not"***

1 ABSOLUTELY YES - 2 YES - 3 NEUTRAL - 4 NOT - 5 ABSOLUTELY NOT

B. Mini survey targeting energy company workers

1. ***Please rate from "strongly like" to "strongly dislike" your experience with the MOOC (Insert title)***

   1 STRONGLY LIKE - 2 LIKE - 3 NEUTRAL - 4 DISLIKE - 5 STRONGLY DISLIKE

2. ***Name the aspect of this course more strongly related to your profession and explain why***

   _____why
   _____

3. ***Name the aspect of this course less related to your profession and explain why***

   _____why
   _____

4. ***Please rate from "very much" to "very little", how much you have learned from the course***

   1 VERY MUCH - 2 MUCH - 3 NEUTRAL - 4 NOT MUCH - 5 VERY LITTLE

5. ***Would you recommend this course to your colleagues? Please rate from "absolutely yes" to "absolutely not***

   1 ABSOLUTELY YES - 2 YES - 3 NEUTRAL - 4 NOT - 5 ABSOLUTELY NOT

6. ***Please, list your out-takes from the course***

   a. --
   b. --
   c. --
   d. --

7. ***Please, say what the new knowledge you have acquired is for (i.e. for career progression, participate in innovation projects)***

   a. --
   b. --
   c. --
   d. --
   e. --

8. ***Please, say what new skills or competencies the company you are working for should care about***

   a. --
   b. --
   c. --
   d. --
   e. --

C. Mini survey targeting teachers/tutors

1. ***Please rate from "strongly like" to "strongly dislike" your experience with the ASSET programme***

   1 STRONGLY LIKE - 2 LIKE - 3 NEUTRAL - 4 DISLIKE - 5 STRONGLY DISLIKE

2. ***As a teacher/tutor, please identify the more convincing aspect of the ASSET programme (the value proposition) and explain why***

   _____

   why _____

3. ***As a teacher/tutor, please identify the less convincing aspect of the ASSET programme and explain why***

   _____

   why _____

4. ***Please rate from "very much" to "very little", how much do you think you have learned from the MOOC experience***

   1 VERY MUCH - 2 MUCH - 3 NEUTRAL - 4 NOT MUCH - 5 VERY LITTLE

5. ***Please rate from "very much" to "very little", how much do you think you have learned from the ASSET experience***

   1 VERY MUCH - 2 MUCH - 3 NEUTRAL - 4 NOT MUCH - 5 VERY LITTLE

6. ***Would you recommend an ASSET course to your colleagues? Please rate from "absolutely yes" to "absolutely not"***

   1 ABSOLUTELY YES - 2 YES - 3 NEUTRAL - 4 NOT - 5 ABSOLUTELY NOT

7. ***As a teacher/tutor, please suggest how the ASSET project can improve its value proposition.***

D. Mini survey targeting women

1. **Did the class improve your level of knowledge and competence in accordance with the principles of gender equality?**

   1 STRONGLY LIKE - 2 LIKE - 3 NEUTRAL - 4 DISLIKE - 5 STRONGLY DISLIKE

2. **Thinking at your personal experience, please name the aspect of the class more strongly related to gender issues _____**
3. **Please name the parts of the class that identifies specific priority areas where further improvement can be made from ASSET workshops**

_____

4. **Thinking of gender issues, what skills or competencies the ASSET classes should care about?**
5. **Did the class offer an approach to ensure non-discrimination and equal opportunity in group class processes?**