

Good DEEDS - Digital Energy Efficiency Designer

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Abstract:

The purpose of this document is to provide all valuable information for anyone wishing to organize and manage training activities for teachers preparatory to their student's participation in the European Good DEEDs Challenge.

Chapter 1 introduces essential information about the Good DEEDs project and the European Good DEEDs Challenge goals.

Chapter 2 illustrates the reference pedagogical framework, describing the operational context, the pedagogical approach, the methods of assessment chosen, and the structure of the training path for teachers.

Chapter 3 describes in detail the training path in terms of

expected results, learning units, and learning objects.

Chapter 4 provides behavioral guidelines for tutors in charge of assisting course participants, measuring their performance, and evaluating the effectiveness of the course.

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01 The Good DEEDs project

The Good DEEDs project envisages as a central result the creation of the European Good DEEDs Challenge to generate three long-term positive effects:

1. *to bring the attention of a large audience to the issue of energy waste deriving from an uneducated use of digital technologies, and to contribute on the one hand to contrasting the dominant "magical" concept of digital that generates desirable results at zero environmental cost, and on the other to stimulate informed and virtuous behavior from the point of view of reducing the environmental footprint.*
2. *encourage a wide adoption by European VET schools of training activities related to emerging needs in the market prefigured by the "New Green Deal" for skills on the energy efficiency of digital systems, remote assistance in augmented reality and AI-based predictive maintenance, providing a training toolkit for teachers and innovative tools for online student training.*
3. *to favor the establishment of local ecosystems of socially responsible organizations that support VET educational activities of particular ethical value.*

The inspiration for the project comes from "The European Green Deal" [COM (2019) 640], where a new growth strategy is proposed to transform "the Union into a modern, resource efficient and competitive economy".

Energy efficiency and the digital sector play a central role in this strategy. The latter by virtue of its transformative potential linked to the advent of artificial intelligences for sure, but also as a recipient of particular attention by virtue of its intense use of energy resources, which becomes increasingly clearly not sustainable. Using digital technology in 2018 led to an energy consumption 37% higher than in 2010. The exact opposite of what is generally attributed to digital technology

The strategy of "The European Green Deal" considers that "it takes 25 years - a generation - to transform an industrial sector and all its value chains". Therefore, even in the field of energy efficiency and the reduction of the digital environmental footprint "it is necessary to make decisions and take action within the next 5 years" to achieve the objectives set for 2050. A scenario that requires the presence right now of professionals with both full awareness of the depth of the digital environmental footprint and the skills to design technological and behavioral processes that will contribute to its reduction.

In this scenario, the Good DEEDS project was born around the idea of the new *Digital Energy Efficiency Designer* professional profile. The promoting Consortium aims to develop a methodology and a learning platform for VET teachers and students, aimed at a strategy of sustainable growth of sectorial skills on reducing the digital environmental footprint, and based on the participation in a annual international competition promoted by a European network of local partnerships between schools, businesses and institutions.

This objective translates into the creation of a Knowledge Management System, a training toolkit for VET teachers and students and the "Online Good DEEDS" platform.

The project adopts a circular approach to activate a self-feeding process. The creation of the Good DEEDS KMS lays the foundations for the definition of a blended training course for VET teachers and students. The teachers acquire theoretical knowledge by studying the contents of the KMS and then apply it in the construction of a training course for students in collaboration with local public and private organizations, sensitive to social responsibility on the environmental issue. Students follow a theoretical path traced by the teachers thanks to the OER available in the KMS and then apply it in the design of solutions for the energy efficiency of their institutes through activities that involve the development of innovative skills such as remote assistance in augmented reality or management of predictive maintenance systems. In this way VET schools receive direct added value from their teaching activities. Finally, the Good DEEDS Challenge requires students to become champions of their territory and to translate into OER available for all the good practices they have implemented in collaboration with their school and local networks. The competition leads to a selection of the best national and then European OER, which, after being validated by a jury of experts, are acquired within the KMS, guaranteeing constant updating and closing the circle of value.

At the end of the project, the pilot's 60 teachers acquire useful knowledge to strengthen a specific digital key competence of their 1200 students: the digital energy efficiency. Competence that contributes to improving qualifications for the world of work as it will evolve in the coming years based on the directives of the "The European Green Deal" for a Europe with zero impact on the environment.

02 The Pedagogical Framework

Starr-Glass [1] describes a pedagogical framework as "the integrated set of philosophical considerations, teaching preferences, and learning values that informs and motivates the instructor in designing and facilitating a learning experience". According to Price, Duffy and Gori [2]], "These considerations are transformed into strategies or approaches for achieving specific educational outcomes. To inform digital design, the framework also needs to take into account the technological affordances in relation to pedagogy and learning design guidelines emerging from research literature."

The following sections apply these concepts to the Good DEEDs project's context, developing them in four components according to the UNITE's pedagogical model [3]:

1. *Pedagogical Framework Context;*
2. *Pedagogical Approach;*
3. *Assessment Techniques;*
4. *Teacher Training.*

02.01 Pedagogical Framework Context

The combination of the components of the pedagogical framework enables the instructor to make the strategic choices required to guide the production of the curriculum and the learning scenarios, taking into account the context in which the training activity takes place.

Of course, The starting point is the needs of the beneficiaries of the training activities.

VET teachers are the direct beneficiaries of the Consortium's training activities. Their students are the indirect beneficiaries, as they will participate in training paths created by the teachers at the end of the course. This condition must always be kept in mind because it guides the choice of the material made available to teachers to create the learning scenarios. This material must be immediately understandable and as ready as possible for use in class with students.

Teachers need to learn:

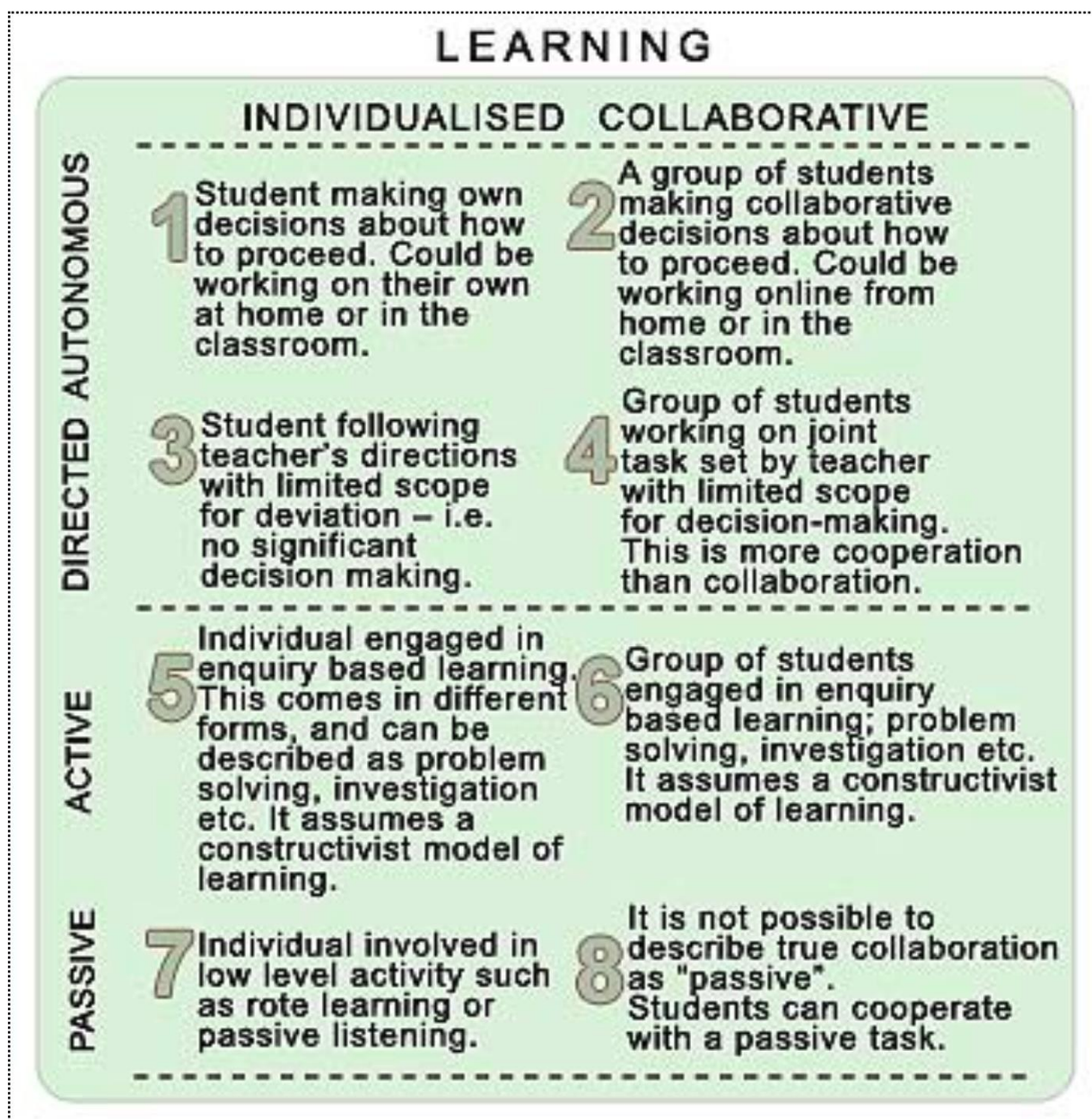
- *to consult and update the KMS;*
- *to build training courses and learning scenarios starting from the OER contained in the KMS;*
- *to share knowledge on the interconnected issues of digital energy efficiency, predictive maintenance, and remote data collection assisted in augmented reality.*

More specifically, teachers must be able to create learning scenarios that guide their students in the following activities:

- *Detection and estimation of the energy consumption of an organization's digital systems;*
- *Analysis of the energy efficiency culture present in the organization mentioned above;*
- *Development of an energy efficiency plan for the organization's digital systems;*
- *Creation of one or more OERs that allow the reuse of the knowledge gained or replicating the activities carried out to achieve it.*

Furthermore, the circular nature of the European Good DEEDs Challenge relies upon a concept of collaboration and active participation on the part of teachers and students, which must already be evident from the initial training paths of both.

Starting from these requirements it is immediate to recognize the positioning of the training for teachers in cells 2 and 6 of the matrix proposed by the UNITE methodology.



UNITE's Matrix

It follows that the pedagogical approach must be functional to the description of the course as "A group of trainees making collaborative decisions about how to proceed. They could be working online from home, office, or in the classroom. The group of trainees are engaged in enquiry based learning, problem solving, investigation. It assumes a constructivist model of learning."

The user requirements on the technological front are not very stringent, but still important.

It must be possible to carry out all activities online, both due to the impossibility of predicting the evolution of the pandemic in the months in which the pilot is expected to be carried out, and to encourage the participation of teachers from all over the country, regardless of geographical constraints.

Maximum ease of use and the possibility of carrying out activities through the type of personal computer preferred by the trainee must be pursued, be it a desktop, a laptop, a tablet or a smartphone. The trainee must be able to access the same functions on each of the four formats of personal computers just mentioned, and the quality of the experience must be comparable.

Finally, a very important requirement in practice is the search for maximum flexibility in the organization of learning activities to meet the teachers' need to integrate the study with all the activities required by everyday working life.

02.02 The Pedagogical Approach

User requirements orient the pedagogical approach towards teamwork and a collaborative process of developing the learning path. The use of learning scenarios fits very well to this context and to the underlying concept of trainee as a 'producer' or 'constructivist' of knowledge. Furthermore, teachers would like to practice blended learning and/or flexible learning in their daily practice due to the major constraints in terms of time availability to which they are subjected. Therefore, Good DEEDs' pedagogical approach integrates the key principles and praxis of constructivist theory, blended, collaborative and active learning into learning scenarios and the implementation phase.

Constructivism

According to [1] "constructivism embraces the concept where students create knowledge and meaning through their interaction with one another, their environment and with teachers. Teachers can be thought of as being coaches, facilitators or even partners with learners in the learning process. Constructivism in the classroom promotes active learning processes that lead not only to the construction of a single meaning but also to a contextual system of meaning." In a constructivist approach, the teacher acts more as a coach or facilitator, shares with trainees responsibility and decision-making, and demonstrates mutual respect.

Blended Learning

In blended learning one part of the communication takes place face-to-face in a videoconference room or in a classroom, while the other is asynchronous.

This solution meets the need for high interactivity through rapid communication, both verbal and non-verbal, for the deepening of some topics, and the construction of the cognitive context in a collaborative way. At the same time, it allows trainees to manage in a more free and flexible way the phases of simple acquisition of basic knowledge, which do not particularly benefit from the interaction with the tutor or with classmates.

The 'flipped classroom' approach is particularly suitable for the purposes of the project, as it allows trainees to acquire the fundamental concepts independently and at their own pace, and then discuss and deepen them with colleagues and the facilitator in a limited number of face to face meetings.

Collaborative Learning

The term 'collaborative learning' covers a wide variety of educational approaches that have in common a joint intellectual effort on the part of the students or students and the facilitator together. In the context of Good DEEDs, collaboration is expressed above all in brainstorming and peer review activities during face-2-face sessions and through the possibility of interacting through the online forums reserved for participants.

Active Learning

Active learning is defined as 'any instructional method that engages students in the learning process' [4]. In Good DEEDs, facilitators direct trainees from the beginning towards applying the knowledge and skills acquired to the production of learning scenarios customized to the needs of their students and the operational context of their institution. In this way, trainees have to critically evaluate their training path and dynamically adapt it to their actual needs.

02.03 The Assessment Techniques

In training oriented towards collaboration, active participation, and problem-solving, the learning assessment not only serves to determine what has been learned by the trainee but is a fundamental part of the training process. *Formative assessment* is defined as "all activities undertaken by teachers and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged." [5]

The Good DEEDs blended course adopts the principles of formative assessment through the implementation of four complementary techniques.

Computer-based assessment

The online administration of multiple-choice tests is helpful in all phases of the course:

- *before the course, to define the initial values of the reference indicators to be rechecked at the end to measure the progress of the trainee, but also to identify areas where the student may not have the minimum necessary prerequisites;*
- *during the course, at the end of each didactic unit to allow the trainee to strengthen the learning of the fundamental concepts through a mechanism of repetition of correct answers and revision of incorrect ones;*
- *at the end of the course, to measure progress and provide information on topics to be reviewed if necessary.*

Tutor-assessment

Tutors provide an additional level of assessment by answering questions from trainees on forums or through direct contact channels. Their purpose is not to grade the trainees' work but to facilitate or reinforce their understanding of the teaching material.

Self-assessment The active involvement of trainees in assessing their work is an essential aspect of their training. It is a way to stimulate them to reflect on the most relevant elements of the training path they are completing.

In the practice of the Good DEEDs blended course, self-assessment translates into the request to fill in an elementary logbook that lists the three most useful topics among those addressed in each training module and the possibility of choosing between alternative sets of assessment tests at the end of each module.

Peer-assessment

In peer assessment, trainees must help each other develop, review, and verify their work.

In the practice of the Good DEEDs blended course, the presence of forums is foreseen where trainees can share their work, ask for help, and comment on those of others.

However, the most important moment of peer assessment happens in the face-to-face sessions where the tutors stimulate the dialogue between the attending teachers. This activity is extensive and relevant during the last face-2-face session, dedicated to the learning scenarios created by the teachers.

02.04 The Teacher Training

In the previous sections, the pedagogical approach appears justifiably focused on a blended model, which favors active participation.

In practice, teacher training translates into a self-paced 30-hour course, organized in three training modules, set between four face-to-face sessions.

The primary purpose of the face-to-face sessions is to foster active involvement and reinforce learning through the re-presentation of crucial concepts, discussion, teamwork, and peer review. In addition, the sessions also serve to provide the study context for the next self-paced module. For practical reasons, each session is held through national editions. This facilitates communication, reduces the number of participants to an effectively manageable quantity, and allows for a uniform organizational and regulatory context.

The training focuses on three main moments that identify with the three modules for self-paced learning:

- *learning how to design a work-based learning scenario focused on the design of a digital energy efficiency improvement plan;*
- *learning how to use the KMS and its OER to create proper educational content for the scenarios;*
- *practicing by developing a full scenario that will be used later by each teacher with his/her students.*

At the beginning of the course, the complete project is presented and a pre-course questionnaire is administered to establish a reference profile on the starting level of competence and the expectations of the participants.

At the conclusion, the rules of participation in the European Good DEEDs Challenge are explained, and a final questionnaire is administered to verify the variation of competences and to what degree the expectations have been met.

The formative assessment activities are constant throughout the course. They materialize as a multi-choice test and a reflection stimulated by an open question at the end of each module, and through moments of peer review and discussion with the tutors during the face-to-face sessions.

02.05 Technical requirements

02.05.01 General requirements

Functional requirements

The training activities make use of the "Online Good DEEDs" digital platform, which consists of three main functional modules: "KMS", "EDU" and "GDC".

The "KMS" module provides the typical functions of knowledge management systems. It allows the collection, updating, research, and consultation of OERs on reducing the environmental footprint, energy efficiency of digital systems, IoT, machine learning, systems and methods for predictive maintenance, as well as methodologies and scenarios for their teaching and learning.

The "EDU" module supports the flipped classroom training activities. It offers services both for the trainees and the tutors mainly. Peer learning tools for the trainees include:

- *registration;*
- *forum;*
- *personal messaging;*
- *white-board;*
- *training material search, view, and download;*
- *self-assessment.*

Class management tools for the tutors include:

- *virtual classroom,*
- *progress monitoring,*
- *reporting.*

The "EDU" module also includes a standalone functionality that teachers can make available to their students to facilitate AR-assisted remote collection of data and information on the energy efficiency of an organization's digital services.

The "GDC" module provides the functions required to manage local collaboration networks and carry out the EU Good DEED Challenge. The module provides the standard services of the communities of practice:

- *registration and profile management;*
- *forum;*
- *messaging;*
- *sharing of useful materials and templates.*

In addition to these, specific services will be made available to manage the GDC workflow:

- *registration;*
- *calendars;*
- *notice boards for communications;*
- *FAQs;*
- *challengers' deliverables upload;*
- *collaborative evaluation of challengers' deliverables.*

All the modules above must guarantee multi-lingual access.

Non-functional requirements

The platform integrates technologies, frameworks, and services based on open web standards to ensure maximum accessibility via a browser on all types of equipment (smartphones, tablets, laptops, desktop computers, smart-TVs). The development follows a "mobile-first" approach to ensure the full usability of the contents through smartphones. The quality of the user experience is the main focus of the platform development activities. The developers must limit the original code to the minimum necessary to guarantee the seamless integration of services that already guarantee the required functions. The reference example is that of videoconferencing services for carrying out face-to-face meetings. In that case, the platform must allow you to access the meeting from within by creating a calendar where you can insert the links to follow to join the sessions, a dedicated section in the forum, or other equivalent solutions.

The EUPL license (European Public License) will guarantee access and reuse of all the original software developed thanks to Erasmus+ program funding for the Good DEEDS project. The use of other open licenses such as GPL v3 or similar can be considered if dependencies with other software emerge during the design phase. Also, in this second case, the possibility of issuing under a double license will be evaluated, where permitted. The software must be downloadable from the project website and/or GIT platforms.

02.05.02 EDU - Blended

The EDU module of the "Online Good DEEDS" platform guarantees the management of the blended course for teachers.

User profiles

The platform includes six user profiles: Visitor, Trainee (registered user), Tutor, Curator, Administrator, Owner.

The Visitor can access the following features:

- *Consult the general orientation information on the platform;*
- *Consult the list of teaching materials available for registered users;*
- *Register on the platform.*

The Trainee can access the following additional features:

- *Manage your user profile;*
- *Participate in a forum;*
- *Exchange private messages;*
- *Collaborate with a white-board;*
- *Follow a training course (virtual classroom);*
- *Carry out a self-assessment;*
- *Join a videoconference.*

The Tutor can access the following additional features:

- *Check the progress of the Trainees;*
- *Create reports about Trainees' progress;*
- *Manage Trainee profiles*
- *Host a videoconference.*

The Curator can access the following additional features:

- *Create, modify and delete training courses (virtual classroom);*
- *Assign the Tutor profile to a registered user;*
- *Manage profiles of the Tutors*
- *Host a videoconference.*

The Administrator can access the following additional features:

- *Assign the Curator profile to a registered user;*
- *Manage all user profiles of a lower level than Administrator;*
- *Manage all standard system administration functions, including the production of reports on platform's usage.*

The Owner can access the following additional features:

- *Assign the Administrator profile to a registered user;*
- *Manage all user profiles, including those of the Administrators;*
- *Manager of all the standard functions of the owner of a system (suspension, cancellation ...)*

Features

Orientation

Any Visitor must be able to consult the general information on the platform and its training offer via the web.

List of educational materials

Any visitor must be able to consult the list of courses available for registered users. For each course, a general presentation must be available, the list of any prerequisites, the learning outcomes, the detailed structure at the level of modules and learning units, the expected average commitment in terms of time, the language of the course. The form must be written in the course's language.

Registration

Any visitor must be able to register freely to the system, identifying himself at least with first name, last name, email and country of origin. Optional information is also requested such as a picture, affiliation, title, city of residence and alternative contact channels (mobile phone or account on the most common personal messaging systems).

During the registration phase, the Visitor must be able to access all the information required by the GDPR regarding the processing of his data.

Profile management

Each registered user must have the possibility to modify any information on their profile, or to delete it and completely remove their data from the system.

Tutors must be able to modify or disable a Trainee's profile.

Curators have the same privileges as Tutors. In addition, they can assign or revoke the Tutor profile to a registered user.

Administrators have the same privileges as Curators. In addition, they can assign or revoke the Tutor or Curator profile to a registered user.

The Owner is the only user able to assign the Administrator profile to a registered user.

Forum

The standard features of a forum must be available to all registered users to manage discussions and service communications. This goal can be obtained either by setting an internal vanilla web-forum or by creating a web-directory to discussion groups created on other dedicated discussion platforms that might offer more advanced services and easier integration with the daily discussion workflow of the registered users. In the latter case, the selected external platform must guarantee reliability,

availability of services over time, free access and respect for user privacy. Platforms that monetize the data entered by users should not be considered.

Private messages

Trainees, Tutors, Curators and Administrators must be able to access a user directory, and exchange private messages. The same considerations shared about the forum apply here.

Virtual Classroom

The virtual classroom is the place where the Trainee can access the lessons. Given the combination of 4 face-to-face events and didactic modules to be used in self-training, the structure of the virtual classroom consists of a web page, from which it is possible to access all the information and materials of a module or a learning unit. The pages dedicated to the modules will contain a general description and the list of learning units. The pages dedicated to the learning units will allow access to all learning objects. The face-2-face meetings are to be considered as learning units, and fall within the previous series. They will contain a brief introduction to the meeting and the link to participate in the videoconference.

Self-assessment

The Trainee must be able to verify his/her own learning by means of a series of multiple choice tests and structured moments of reflection at the end of each learning unit.

Multiple choice tests must provide informative feedback, confirming the correct answer or giving precise indications on the topics to be reviewed in case of wrong answer.

The reflection exercises at the end of each learning unit and module consist in the request to write a list of the most important concepts learned and to accompany each item with a brief motivation of their answer.

Further assessment moments are carried out interactively during the face-to-face sessions by both tutors and colleagues.

The aim of the assessment activities as a whole is not to measure the performance of the participants, but to provide them with tools to improve their awareness of their level of preparation in view of the activities with the students.

Videoconferencing

The course requires the Trainees to attend to four face-2-face sessions. It might be convenient to hold such sessions in presence in some cases, but as a general rule they will be hosted online. The platform must be as service-agnostic as possible and treat every videoconference as a learning unit. The learning unit page will contain the session topic, host, presentation, date, time, and access link. Partners are free to pick the videoconferencing platform they prefer as long as it meets the following minimum requirements:

- *Free to use for trainers;*
- *Participants can be split temporarily in sub-rooms for workgroup sessions;*
- *Session can be recorded,*
- *Attendance can be demonstrated;*
- *A whiteboard is available (optional).*

Tutoring

Tutors have an educational and a monitoring function.

From the educational point of view, the Tutors' primary commitment is the conduct of face-2-face sessions for discussion and consolidation of the contents of the didactic self-learning module that preceded it. During the self-learning modules, the Tutors carry out a limited help-desk activity towards the Trainees to clarify any doubts about the use of the platform and the training path.

To carry out the activities indicated so far, the tutors use the aforementioned communication tools (forum, private messages, videoconference).

At the same time, the Tutors have the task of monitoring the progress of the pilot and collecting the data of the indicators that allow to evaluate its effectiveness. The minimum set of indicators consists of the number of modules, learning units, and learning objects started and completed, the time taken to complete them, and the number of requests for help received for each of them. The platform must allow the collection and export of such data.

Furthermore, a pre- and post-course evaluation survey is a fundamental tool for assessing the objective and perceived quality of the course and the platform. The pre-course survey contains questions on the perception of the value of one's skills and the expectations regarding the training course. The post-course survey includes questions on the perception of the variation of one's skills, the quality of the experience, and the degree of satisfaction of expectations. The platform must allow the administration of the forms and the export of their data for analysis.

Curation

The Curators must be able to create, modify and remove learning paths, composed of the virtual classrooms described in the dedicated paragraph. The platform must offer the functionalities to support these activities.

Administration

The platform must offer full administrative tools for its management and maintenance (software update, backups, user management, security, privacy, etc.).

02.05.04 Good DEEDs Challenge services

The GDC module of the "Online Good DEEDs" platform offers the standard services of the platforms to support communities of practice, namely:

- *registration of users and management of their profile;*
- *message boards;*
- *forum for thematic discussions and news sharing;*
- *private messaging services;*
- *sharing of images and files;*
- *polls and voting.*

Taking advantage of these services, a section of the GDC module must be configured to provide support for the organization and management of the annual European Good DEEDs Challenge:

- *presentation of general information on the initiative;*
- *registration of participants;*
- *help-desk;*
- *Upload of the proposed works;*
- *Validation and evaluation of the works by an international jury operating remotely.*

03 Curriculum

03.01 F2F01 - Introduction to the course

Title

Introduction to the blended course

Learning outcomes

By the end of the session, participants will:

- *understand the objectives and the articulation of the training course;*
- *learn to use the main features of the EDU platform;*
- *understand how to interact with tutors;*
- *understand the objectives of self-paced learning Module 1.*

Description

This face-2-face session marks the start of the blended course. It is organized nationally and all teachers enrolled in the course for that country are expected to attend.

The session includes both presentations and practical moments that introduce the participants to each other and with the tutors, illustrate the dynamics of the course, explain the main features of the Good DEEDs EDU platform, and present the goals of the self-paced learning Module 1 .

Prerequisites

Before participating in the session, trainees must:

- *Read the summary of the Good DEEDs project, extracted from chapter 1 of this Training Toolkit;*
- *Register on the EDU platform (optional).*

Agenda

- *Welcome and ice-breaking practice*
- *Presentation: General info about the course*
- *Practice: How to use the Good DEEDS EDU platform*
- *Presentation: How interact with tutors*
- *Presentation: How to use the self-assessment features*
- *Practice: Filling the pre-course survey*
- *Presentation: Intro to self-paced learning Module 01*

Effort

120 minutes

Delivery method

Videoconference, or in-presence workshop. Hybrid events are strongly deprecated.

Language

National language.

03.02 Module 01 - Design

Description Self-paced learning module. The trainee has access to all the learning material on the Good DEEDs EDU platform and he is asked to study it before the second face-2-face session.

Learning outcomes By the end of the module the trainees will:

- *understand the key concepts about carbon footprint, digital footprint, and energy efficiency;*
- *be able to design a work-based learning scenario about the digital energy efficiency design of small-medium-sized local organizations.*

Learning units

1. *An introduction to carbon footprint, digital footprint and energy efficiency*
2. *Designing a work-based learning scenario*
3. *Setting the open-school context*
4. *Scene 1: Preliminary investigation*
5. *Scene 2: Preparation and planning*
6. *Scene 3: Digital Energy Consumption Assessment (hardware, software, services)*
7. *Scene 4: Remote assessment*
8. *Scene 5: Interviews (Culture and processes assessment)*
9. *Scene 6: Data analysis*
10. *Scene 7: Designing a digital energy efficiency improvement plan*
11. *Scene 8: Presenting the plan*

Assessment units

1. *Multiple-choice test containing one question about each learning unit. Every learning outcome must be tested at least once.*
2. *Open question: "What did I learn from this module?" (Max 2,000 characters).*

Expected effort

- *10 hours*

03.03 F2F02 - Designing a good DEED learning scenario

Title

How to design a good DEED learning scenario

Learning outcomes

By the end of the session, participants will:

- *understand the key concepts about digital footprint;*
- *be able to design a work-based learning experience about the efficiency of small-medium-sized local organization's digital systems;*
- *understand the objectives of self-paced learning Module 2.*

Description

This face-2-face session helps the trainee check and reinforce what he/she learned about designing a scenario for a work-based learning experience about the efficiency of small-medium-sized local organization's digital systems. It is organized nationally and all teachers enrolled in the course for that country are expected to attend.

The session includes both presentations and practical moments that let participants reinforce what they learned during the self-paced Module 1 about designing a work-based learning scenario about digital energy efficiency design. At the end of the session, the host will present the goals and the timeline of the self-paced learning Module 2.

Prerequisites

Before participating in the session, trainees must:

- *Complete Module 1;*

Agenda

- *Welcome*
- *Presentation: Digital footprint 101*
- *Groupwork*
- *Q&A time*
- *Presentation: Scenarios for work-based learning experiences on Digital Energy Efficiency Design - Basic Structure*
- *Groupwork*
- *Q&A time*
- *Presentation: Scenarios for work-based learning experiences on Digital Energy Efficiency Design - Customization and Deployment*
- *Groupwork*
- *Q&A time*
- *Presentation: Intro to self-paced learning Module 02*

Effort

120 minutes

Delivery method

Videoconference, or in-presence workshop. Hybrid events are strongly deprecated.

Language

National language.

03.04 Module 02 - Content Development

Description Self-paced learning module. The trainee has access to all the learning material on the Good DEEDs EDU platform and he is asked to study it before the third face-2-face session.

Learning outcomes By the end of the module the trainees will:

- *understand the key concepts about OERs;*
- *be able to find and extract OERs from the Good DEEDs KMS platform;*
- *be able to create proper content for a work-based learning scenario about the digital energy efficiency design.*

Learning units

1. *Introducing OERs*
2. *An introduction to Creative Commons licenses*
3. *Searching OERs on Good DEEDs KMS*
4. *Reusing Good DEEDs KMS' OERs*
5. *Adding OERs to GOOD DEEDs KMS*
6. *OER's evaluation criteria*

Assessment units

1. *Multiple-choice test containing one question about each learning unit. Every learning outcome must be tested at least once.*
2. *Open question: "What did I learn from this module?" (Max 2,000 characters).*

Expected effort

- *8 hours*

03.05 F2F03 - Content Development

Title

How to develop content for a good DEED scenario

Learning outcomes

By the end of the session, participants will:

- *be able to use the platform's KMS module;*
- *be able to use the OER's from the KMS to develop original content for a work-based learning scenario about the digital energy efficiency design;*
- *understand the objectives of self-paced learning Module 3.*

Description

This face-2-face session helps the trainee check and reinforce what he/she learned about developing content for a work-based learning experience about the efficiency of small-medium-sized local organization's digital systems. It is organized nationally and all teachers enrolled in the course for that country are expected to attend.

The session includes both presentations and practical moments that let participants reinforce what they learned during the self-paced Module 2 about developing content for a work-based learning scenario about digital energy efficiency design. At the end of the session, the host will present the goals and the timeline of the self-paced learning Module 3.

Prerequisites

Before participating in the session, trainees must:

- *Complete Module 2;*

Agenda

- *Welcome*
- *Presentation: How to use the Good DEED's KMS*
- *Groupwork*
- *Q&A time*
- *Presentation: How to structure an OER*
- *Groupwork*
- *Q&A time*
- *Practice: Using the Good DEED's KMS to create content for a simple OER for a work-based learning scenario about digital energy efficiency design.*
- *Q&A time*
- *Presentation: Intro to self-paced learning Module 03*

Effort

120 minutes

Delivery method

Videoconference, or in-presence workshop. Hybrid events are strongly deprecated.

Language

National language.

03.06 Module 03 - Learning Scenario Examples

Description Self-paced learning module. The trainee has access to all the learning material on the Good DEEDs EDU platform and he is asked to study it before the fourth and last face-2-face session.

Learning outcomes By the end of the module the trainees will:

- *be able to develop a full work-based learning scenario about the digital energy efficiency design.*

Learning units

1. *Analysis of the exemplary scenario 1: remote assessment at a privately-held company*
2. *Analysis of the exemplary scenario 2: assessment visit at a public institution*
3. *Assignment: developing a real work-based learning scenario about the design of the digital energy efficiency improvement plan for a local company or institution*

Assessment units

1. *Multiple-choice test containing one question about each learning unit. Every learning outcome must be tested at least once.*
2. *Open question: "What did I learn from this module?" (Max 2,000 characters).*

Expected effort

- *12 hours*

03.07 F2F04 - Learning Scenario Peer evaluation

Title

Creating a good DEED scenario

Learning outcomes

By the end of the session, participants will:

- *be able to create a ready-to-use work-based learning scenario about the digital energy efficiency design;*
- *be aware of the objectives, requirements and timeline of the European Good DEEDs Challenge.*

Description

This face-2-face session helps the trainee check and reinforce what he/she learned about delivering a complete scenario for a work-based learning experience about the efficiency of small-medium-sized local organization's digital systems. It is organized nationally and all teachers enrolled in the course for that country are expected to attend.

The session includes both presentations and practical moments that let participants reinforce what they learned during the self-paced Module 3 about developing content for a work-based learning scenario about digital energy efficiency design. At the end of the session, the host will present the goals and the timeline of the European Good DEEDs Challenge.

Prerequisites

Before participating in the session, trainees must:

- *Complete Module 3;*
- *Create a ready-to-use work-based learning scenario for their students.*

Agenda

- *Welcome*
- *Presentation: Dissection of an exemplary scenario from Module 3*
- *Q&A time*
- *Lab: Trainees split in peer-review subgroups and discuss the scenarios that each of them created as the final assignment of Module 3*
- *Reporting time*
- *Presentation: How to participate into the European Good DEEDs Challenge*
- *Practice: Filling the post-course survey*

Effort

120 minutes

Delivery method

Videoconference, or in-presence workshop. Hybrid events are strongly deprecated.

Language

National language.

04 Tutoring and evaluation

Tutors are responsible for:

1. *Monitoring trainees' progress and keeping them engaged;*
2. *Providing a first-level help-desk support to trainees;*
3. *Organizing and hosting the face-2-face sessions;*
4. *Collecting and analyzing pre- and post-course surveys;*
5. *Producing evaluation reports about the piloting activity at a national level, exploiting also the numeric indicators provided by the platform.*

05 Timeline

The blended course will open on 2022 Week 17 (last week of April) and end on 2022 Week 27 (first week of July)

Week	ID	Activity
17	F2F01	Face-to-face session
	M01	Self-paced learning "Scenario Design"
20	F2F02	Face-to-face session
	M02	Self-paced learning "Content Development"
23	F2F03	Face-to-face session
	M03	Self-paced learning "Exemplary Scenarios"
27	F2F04	Face-to-face session

Partners can apply some reasonable flexibility in calendaring the face-2-face sessions in order to adapt to specific school deadlines at a national level.

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