



Train the Trainer Programme & Resources

Deliverable 3.4

Table of Contents

Table of Contents

| | |
|---|-----------|
| About the Digital4Security project | 4 |
| Document Control Information | 7 |
| What is the Train the Trainer Programme (TOT): | 8 |
| Main elements of the Train the Trainer Programme | 10 |
| Goals of the Train-the-Trainer (TOT) Programme | 10 |
| Key Trainer Competencies | 11 |
| Practical Implementation of the TOT Programme..... | 12 |
| Comprehensive Training Materials and Resources..... | 13 |
| Online Workshops and Webinars..... | 14 |
| Interactive Learning Modules | 15 |
| Sustaining Trainer Excellence | 17 |
| Train the Trainer Programme in Moodle platform | 18 |
| TOT Programmme architecture..... | 19 |
| Module 1: A Guide to Creating a Useful Course Using Moodle..... | 22 |
| Key Components | 22 |
| Learning Activities and Methods..... | 23 |
| Feedback..... | 23 |
| Materials..... | 24 |
| Module 2: Creating a Course Using Moodle's Tools..... | 24 |
| Key components..... | 24 |
| Learning Activities and Methods..... | 26 |
| Feedback..... | 26 |
| Module 3: Engaging Learners with Interactive Activities | 26 |
| Key components..... | 26 |
| Learning Activities and Methods..... | 28 |

| | |
|---|-----------|
| Feedback..... | 28 |
| Materials..... | 29 |
| Module 4: Creating Assessment | 29 |
| Key components..... | 29 |
| Learning Activities and Methods..... | 30 |
| Feedback..... | 31 |
| Materials..... | 31 |
| Module 5: Teaching Techniques and Models | 31 |
| Key components..... | 31 |
| Learning Activities and Methods..... | 32 |
| Feedback..... | 33 |
| Materials..... | 33 |
| Train the Trainer Programme Agenda | 35 |

About the Digital4Security project

Digital4Security is as a ground-breaking pan-European master's program aimed at addressing the escalating challenges posed by cybersecurity threats and data privacy concerns across all industries. This €20m industry-led Master's, supported by funding from the DIGITAL Europe Programme, is a four-year initiative that comprises a Consortium comprising 34 partners spanning 14 countries. This master program will provide comprehensive knowledge of cybersecurity management, regulatory compliance, and technical expertise to European SMEs and companies.

The Digital4Security Consortium

The Digital4Security Consortium is a dynamic pan-European partnership of innovators in the field of cybersecurity. It comprises higher education institutions, industry partners, training providers and cybersecurity clusters, working together to design, promote and deliver a transformative cybersecurity management programme, developed and delivered by the best cybersecurity talent from Europe and worldwide.

| No. | Role | Short name | Partner | Country |
|-----|------|-----------------|--|---------|
| 1 | COO | POLITEHNICA B. | UNIVERSITATEA NAȚIONALĂ DE ȘTIINȚĂ ȘI TEHNOLOGIE POLITEHNICA BUCUREȘTI | RO |
| 2 | BEN | SA | SCHUMAN ASSOCIATES SCRL | BE |
| 3 | BEN | Ataya | ATAYA & PARTNERS | BE |
| 4 | BEN | POLIMI | POLITECNICO DI MILANO | IT |
| 4.1 | AE | CEFRIEL | CEFRIEL SOCIETÀ CONSORTILE A RESPONSABILITÀ LIMITATA SOCIETÀ BENEFIT POLSKI KLASTER | IT |
| 5 | BEN | CMIP | CYBERBEZPIECZENSTWA CYBERMADEINPOLAND SP. Z O. O. | PL |
| 6 | BEN | Contrader | CONTRADER SRL | IT |
| 7 | BEN | DTSL | DIGITAL TECHNOLOGY SKILLS LIMITED | IE |
| 8 | BEN | indiepics | INDEPENDENT PICTURES LIMITED | IE |
| 9 | BEN | MATRIX | MATRIX INTERNET APPLICATIONS LIMITED | IE |
| 10 | BEN | PROFIL KLETT | PROFIL KLETT D.O.O. | HR |
| 11 | BEN | ServiceNow | SERVICENOW IRELAND LIMITED | IE |
| 12 | BEN | UNIBS | UNIVERSITÀ DEGLI STUDI DI BRESCIA | IT |
| 13 | BEN | UDS | GERMAN UNIVERSITY OF DIGITAL SCIENCE GGMBH | DE |
| 14 | BEN | SKILLNET | SKILLNET IRELAND COMPANY LIMITED BY GUARANTEE | IE |
| 15 | BEN | IT@CORK | IT@CORK ASSOCIATION LIMITED LBG | IE |
| 16 | BEN | ADECCO TRAINING | ADECCO FORMAZIONE SRL | IT |

| | | | | |
|-------------|-----|---------------------|---|----|
| 16.1 | AE | ADECCO GROUP | ADDECO ITALIA HOLDING DE PARTICIPAZIONE E SERVIZI SPA | IT |
| 16.2 | AE | Adecco Italia | ADDECO ITALIA SPA | IT |
| 17 | BEN | UNI KO | UNIVERSITAT KOBLENZ | DE |
| 18 | BEN | BRNO UNIVERSITY | VYSOKE UCENI TECHNICKE V BRNE | CZ |
| 19 | BEN | MTU | MUNSTER TECHNOLOGICAL UNIVERSITY | IE |
| 20 | BEN | DIGITAL SME | EUROPEAN DIGITAL SME ALLIANCE | BE |
| 21 | BEN | DIGITALEUROPE | DIGITALEUROPE AISBL* | BE |
| 22 | BEN | MRU | MYKOLO ROMERIO UNIVERSITETAS | LT |
| 23 | BEN | UNIRI | SVEUCILISTE U RIJECI | HR |
| 24 | BEN | NASK | NAUKOWA I AKADEMICKA SIEC KOMPUTEROWA - PANSTWOWY INSTYTUT BADAWCZY | PL |
| 25 | BEN | UNIR | UNIVERSIDAD INTERNACIONAL DE LA RIOJA SA | ES |
| 26 | BEN | NCI | NATIONAL COLLEGE OF IRELAND | IE |
| 27 | BEN | TERAWE | TERAWE TECHNOLOGIES LIMITED | IE |
| 28 | BEN | CY CERGY PARIS | CY CERGY PARIS UNIVERSITE | FR |
| 29 | BEN | BANCO SANTANDE R | BANCO SANTANDER SA | ES |
| 30 | BEN | CYBER RANGES | CYBER RANGES LTD | CY |
| 31 | BEN | RED OPEN S.R.L. | RED OPEN S.R.L. | IT |
| 32 | BEN | VMU | VYTAUTO DIDZIOJO UNIVERSITETAS | LT |
| 33 | AP | FHG | FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV | DE |
| 34 | AP | Pearson Benelux | Pearson Benelux BV | NL |

Document Control Information

| | |
|-----------------------------|--|
| Project | Digital4Security |
| Document Title | Train the Trainer Programme & Resources |
| Work Package Number | WP1 |
| Deliverable Number | D3.4 |
| Lead Beneficiary | Coordinator |
| Project Coordinator: | National University of Science and Technology Politehnica of Bucharest (POLITEHNICA B.) |
| Dissemination Level | Public |
| Authors | Bogdan MOCANU, Răzvan DEACONESCU, Costin CARABAŞ, Florin POP |
| Reviewers | UDS Level 1 review DTSL Level 2 review |
| Description | Train the Trainer Programme |
| Status | Final |
| Delivery Date | 27.11.2024 |
| Due date | 30.11.2024 |
| Approval Date: | 29.11.2024 |

Revision history

| Version | Date | Modified by | Comments |
|---------|------------|--|-----------------|
| 1 | 27.11.2024 | Bogdan MOCANU | Draft |
| 2 | 28.11.2024 | Florin POP, Răzvan DEACONESCU, Costin CARABAŞ, Ciprian DOBRE | New information |
| 3 | 29.11.2024 | Raluca CIOBOTEA | First review |
| 4 | 29.11.2024 | Lucia GRILLI, Kim SCHIERKE, Brian COCHRANE | Final review |



Introduction

What is the Train the Trainer Programme (TOT):

The TOT program is part of the Digital4Security project actions and is dedicated to teachers who will teach within this master. The program is designed to facilitate familiarization and rapid adoption, as well as the effective use of the developed digital platform, as well as the digital learning resources developed within the project.

The TOT program is designed to help teachers integrate advanced digital skills training into their curricula, in the course modules they will teach. The program is rigorously designed, by levels, ensuring high-quality delivery and consistency in participating institutions.

The TOT program offers a set of training materials and resources, which have a general character, specific to online master programs, but also specificity, due to the field of security and data management. The TOT program, in addition to basic information, contains online workshops and webinars for teacher training. The program is offered by experts in educational sciences.

The TOT program is designed to help teachers achieve the following key goals:

- Successful adoption of the digital platform developed to support the master's degree;

- Awareness of the aspects of curriculum design and content creation, support for the accessibility of materials, course organization and implementation of active and inclusive learning strategies;
- Development of a systematic approach in the teacher-student relationship, which develops skills for observing participants during learning and assessment, but also providing feedback, improving learning and self-improvement through systematic formative and summative assessments;
- Exploration of new teaching techniques and methods to maintain the efficiency of online teaching and for understanding difficult concepts in the developed master's curricula;
- Adoption of new, learner-centered, comparative assessment models and identification of remedial methods in the case of students who do not pass the assessment tests;
- Continuous improvement of teachers' skills.



Main elements of the Train the Trainer Programme

The TOT Programme is addressed to university members that are part of the consortium. Its purpose is to support the quick adoption of the platform for lecturers within the consortium and other guest lecturers or experts from academia or industry. The TOT programme will provide a package of training materials and programme resources for localization and use by faculty, along with online workshops and webinars for group training. The key elements of the Train the Trainer Programme focus on 3 major directions:

- (i) training materials and Resources;
- (ii) online workshops and
- (iii) interactive learning modules.

Goals of the Train-the-Trainer (TOT) Programme

The Train-the-Trainer (TOT) Programme ensures that educators are not only prepared to use digital tools but are also equipped to create meaningful, impactful learning experiences. Key goals include:

- Accelerating Digital Platform Integration: Trainers will learn how to upload course content, manage virtual classrooms, and utilize analytics dashboards on the Digital4Security platform.
Example: In the module “A.I. & Emerging Topics in CyberSecurity” the teacher need to upload different type of content: documents in different formats (pdf, docx, etc.), datasets, databases, source code, videos. The content is annotated and shared to the different users.

- Designing Clear, Practical Content: Trainers will focus on simplifying complex cybersecurity topics, linking them to real-world scenarios relevant to industry professionals.
Example: Breaking down a topic like “data privacy” into practical examples such as understanding the implications of GDPR compliance in daily business operations.
- Promoting Active Learning and Engagement: Trainers will be equipped to implement methods that encourage participation and critical thinking without requiring prior technical knowledge.
Example: Hosting group discussions or role-playing exercises where participants evaluate the risks of a cybersecurity breach in a hypothetical company.
- Encouraging Peer Learning and Collaboration: Trainers will learn to foster collaboration among students, leveraging their diverse professional backgrounds to enrich learning.
Example: Designing activities where participants share their industry experiences and collectively identify cybersecurity challenges.

Key Trainer Competencies

1. Professional Competencies
 - a. Subject Simplification: Ability to convey cybersecurity concepts in plain language, emphasizing their relevance to non-technical contexts.
Example: Explaining encryption by comparing it to locking a file in a digital safe, with only the intended recipient holding the key.
 - b. Real-World Relevance: Trainers must link theoretical concepts to practical applications in various industries.
Example: Demonstrating how phishing attacks could impact a small business and discussing preventative strategies.
 - c. Assessment Expertise: Crafting assessments that focus on practical understanding rather than technical execution.
Example: Designing quizzes with scenario-based questions, such as identifying weaknesses in an email communication policy.
2. Methodological Competencies
 - a. Simplified Curriculum Design: Ability to organize content into bite-sized, easily digestible modules.
Example: Dividing a module on cybersecurity threats into three parts: what they are, why they matter, and how to mitigate them.

b. Interactive Learning Techniques: Proficiency in using methods like storytelling, case studies, and simulations to engage students.

Example: Presenting a case study about a famous data breach and guiding students to brainstorm preventative measures.

c. Feedback Skills: Trainers should provide constructive feedback that encourages reflection and learning.

Example: Offering specific, actionable advice such as, “Your response identifies the threat well, but consider how communication policies could prevent similar incidents.”

3. Social Competencies

a. Empathy and Patience: Trainers need to understand the challenges of learning new concepts for non-technical professionals and respond with encouragement.

Example: Recognizing when a participant struggles with terminology and offering additional explanations or resources.

b. Facilitating Peer Sharing: Ability to draw out students' professional insights and integrate them into the learning process.

Example: Asking participants to share examples of cybersecurity challenges from their industries and leading a group discussion on solutions.

c. Clear Communication: Trainers must use straightforward language and visual aids to explain concepts effectively.

Example: Using charts or diagrams to show the flow of data during a cyberattack, rather than technical jargon.

Practical Implementation of the TOT Programme

- Training Materials and Resources: Trainers will receive templates for creating non-technical lesson plans, accessible slide decks, and visual aids.

Example: A slide deck with simplified diagrams showing how ransomware operates, paired with tips for businesses to protect themselves.

- Interactive Workshops: Hands-on workshops will help trainers practice adapting technical content for non-technical learners.

Example: Creating a scenario where participants role-play as managers responding to a potential phishing email.

- Engagement Strategies: Trainers will practice using storytelling and relatable examples to captivate their audience.

Example: Sharing a story about a company that fell victim to a data breach due to weak passwords, emphasizing the human side of cybersecurity.

- Assessment and Feedback Modules: Trainers will learn to design assessments that test understanding without requiring technical execution.

Example: A multiple-choice quiz with scenarios like identifying potential phishing attempts in email examples.

Comprehensive Training Materials and Resources

The TOT programme delivers a robust and versatile package of training materials aimed at equipping faculty members with the tools, knowledge, and skills necessary to excel in their teaching roles and professional development. The materials are customizable allowing them to fit the needs for the educational objectives of the consortium partners.

The package includes a variety of resources such as lesson plans, workshops and online seminars activities, real use case studies. The resources are aligned with modern pedagogical practices and the latest advancements in education. This ensures that trainers can easily integrate.

Moreover, the TOT programme emphasizes localization, allowing educational institutions to modify the content to address specific regional, or disciplinary nuances. This adaptability fosters inclusivity and relevance, of the materials across the consortium partners.

Ultimately, the programme aims to create a unified yet flexible framework that supports faculty members in achieving teaching excellence and advancing institutional quality standards.

The materials provided within the TOT programme include a wide range of resources for the that will equip them with the necessary competencies to utilize the digital learning platform (the Full-Fabric component and the Moodle Component). These resources are tailored and ensure that the trainers can integrate the digital technologies seamlessly into their lectures.

The training resources will provide step-by-step instructions on how to navigate the digital learning platforms, configure courses, and maximize the use of its diverse functionalities. These guides address both basic tasks, such as managing user accounts and creating content, as well as advanced features, including performance analytics for

tracking learner progress and customizing content to cater to varied learning preferences.

The online workshops and seminars provide a visual and interactive method of learning, illustrating practical applications of the platform's features in various instructional contexts. The videos will demonstrate complex tasks, such as designing multimedia-enriched lessons, facilitating online collaborations, and effectively managing digital assessments.

In conclusion, the materials are designed not only to familiarize trainers with the technical operations of the platform but also to provide them with effective pedagogical knowledge of using digital platforms. This ensures that trainers are well-prepared to design engaging, dynamic, and impactful digital learning environments that enhance the overall educational experience.

Online Workshops and Webinars

The TOT programme includes online workshops and webinars, designed to support and equip the trainers with the necessary knowledge for seamless lectures. Also, through these kinds of activities the TOP programme fosters collaborative learning and provides participants with practical, hands-on experience to various digital tools and resources.

During the workshops, trainers will dive directly into the functionalities of the digital learning platform. They will explore using a "learn-by-example" and "learn-by-mistake" approaches the digital learning platform features in real-time with guidance from instructors.

In our vision, the webinars serve as dynamic discussion spaces where participants can ask questions, share ideas, and interact with peers and experts. Each webinar is tailored to a specific theme or challenge, offering focused insights and creative solutions to help trainers apply what they learn to real-world teaching scenarios.

By combining structured guidance with interactive exploration, the online workshops and webinars ensure that trainers feel confident and excited about using the digital learning platform resources effectively.

The webinars offered within the TOT programme cover an extensive range of topics, ensuring that all faculty members gain valuable insights and skills. The sessions are structured to address both foundational and advanced aspects of using the digital learning platform, providing a smooth training experience.

Starting with primary platform navigation, participants are guided through essential features such as course setup, user management, and content delivery, ensuring everyone feels confident using the platform's basic functions. As the webinars progress, more sophisticated topics are introduced, focusing on innovative teaching techniques and strategies to elevate the learning experience. The key themes covered may include:

- **Flipped classroom:** trainees learn how to deliver core content online for students to explore at their own pace;
- **Gamification:** trainees are introduced to the principles of gamification, exploring how elements such as badges, leaderboards;
- **Collaborative learning:** Participants discover strategies for facilitating group work and collaborative projects in a digital environment;
- **Use-Case studies:** webinars provide insights into the use of case studies as a powerful teaching tool;
- **Brainstorming:** sessions explore methods for fostering creativity and generating ideas through online brainstorming activities;
- **Debriefing:** Participants are introduced to techniques for conducting meaningful debriefing sessions after activities or assignments.

Interactive Learning Modules

The TOT programme engages the trainees in learning and growth through its Interactive Learning Modules. They are designed to empower trainees with the necessary knowledge for digital teaching. These modules offer a flexible, experience, ensuring that every participant will be able to use modern teaching technologies. Trainees can adopt different strategies for keeping students engaged in a digital environment, exploring tools like interactive quizzes, live polls, and discussion boards.

Trainees will discover an accessible methodology for training, which encourages real-world applications and use-cases that makes lessons relevant and practical for students. They will also explore multiple teaching approaches:

- **flipped Classroom model** In this model, traditional teaching is shifted into a dynamic experience where students prepare with digital resources and use class time for meaningful, interactive activities;

- **gamification** In this approach students will discover learning through playing and learning. This model includes: leaderboards, badges, and challenges into your lessons, turning routine tasks into exciting, motivational activities for your students.
- **collaborative learning**, where trainees are equipped with tools and techniques to create teamwork-focused activities, from shared digital workspaces to real-time brainstorming sessions.
- **brainstorming and debriefing** In these models trainees will learn how to spark creativity into their students guide them in reflecting on their learning experiences.

The TOT programme is built on a foundation of continuous learning and adaptability, recognizing that feedback is a vital component of any effective training initiative. To ensure that the training remains relevant, practical, and responsive to the needs of faculty, the programme incorporates robust feedback and improvement mechanisms.

From the outset, trainees are encouraged to share their thoughts, experiences, and concerns about the training materials and sessions. Whether through structured surveys, open-ended feedback forms, or live discussions during workshops, the programme provides multiple channels for participants to voice their perspectives. This open communication ensures that every trainer, regardless of their expertise or background, feels heard and valued.

We propose a feedback methodology:

- **Post-Module Evaluation.** After completing each module, trainers are invited to provide feedback on its clarity, relevance, and usability;
- **Mid-Programme Check-Ins.** Periodic check-ins allow trainers to share their experiences with the programme so far, highlighting successes, challenges, and areas for enhancement. This ensures that adjustments can be made in real-time, improving the learning experience for current and future participants;
- **End-of-Programme Reviews.** At the conclusion of the training, comprehensive reviews are conducted to gather holistic feedback on the entire programme;
- **Highlighting Gaps.** Participants can identify missing content or skills they feel would be beneficial, ensuring that the resources remain aligned with the real-world demands of teaching in a digital age;
- **Building a Feedback-Driven Community.** The programme fosters a collaborative atmosphere where trainers not only provide feedback but also engage in discussions with peers and facilitators. This creates a dynamic, supportive

community where ideas are exchanged, challenges are addressed collectively, and best practices are shared.

Through this feedback methodology, the TOT programme ensures that its training resources remain dynamic, adaptable, and truly reflective of the needs and insights of the educators it serves. This commitment to responsiveness creates a culture of excellence, where trainers and the programme evolve together.

Sustaining Trainer Excellence

To ensure long-term impact, the programme includes:

- Online Support Groups: Forums where trainers can share teaching experiences, troubleshoot challenges, and access fresh materials.
- Refresher Sessions: Periodic webinars to update trainers on new teaching techniques and cybersecurity trends.
- Feedback Loops: Continuous evaluation of trainers' effectiveness, coupled with coaching for improvement.



Train the Trainer Programme in Moodle platform

The Consortium has selected Moodle as the platform for delivering the Digital4Security TOT programme. As one of the world's most widely adopted learning management systems, Moodle is renowned for its scalability, demonstrated through large-scale implementations worldwide. Many of our academic partners are already experienced with Moodle, given its regular use within their institutions, which minimizes the learning curve for both faculty and students.

Moodle offers a range of powerful features that make it an ideal choice for this programme, including:

- **User-Friendly Design:** Built with a user-focused approach to ensure ease of navigation and interaction.
- **Comprehensive Accessibility:** Equipped to meet the needs of users with special requirements, ensuring an inclusive learning experience.
- **Collaborative Learning Tools:** Facilitates teamwork and engagement through its wide array of collaborative features.
- **Advanced Analytics and Reporting:** Provides robust tools to monitor and assess learner progress and programme effectiveness.
- **Extensibility:** Supported by a global community of developers, enabling ongoing innovation and enhancements.
- **Modular and Open-Source Framework:** Allows customization to suit diverse institutional needs.

- **Support for Plugins and Integrations:** Compatible with a broad range of plugins and external systems, enhancing its functionality.

Moodle's versatility and adaptability make it a cornerstone of the Digital4Security TOT programme supporting a seamless and efficient learning experience. As of October 2024, Moodle had more than 155,753 active sites registered across 239 countries, with nearly 430 million users.

The Digital4Security [TOT Programme](#) is integrated into the project's Moodle platform. The program guides the faculty through interactive modules covering Moodle tool utilization, engaging content creation, innovative teaching methods, and more. By the end, the user will have a deeper understanding of Moodle dynamics and the ability to improve students' learning experiences.

The TOT Programme in Moodle is divided into the modules shown in Fig.1.

TOT Programme in Moodle Platform

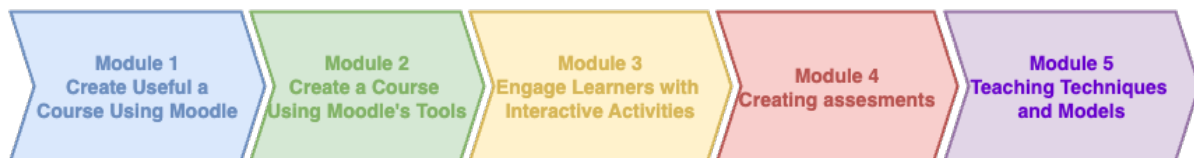


Fig. 1. TOT programmme Moodle courses overview.

TOT Programme architecture

The Digital4Security TOT programme has a complex architecture that encompasses multiple components as shown in Fig. 2. The components are: (i) courses (as shown in Fig. 1), (ii) resources (written and visual training materials), (iii) libraries, (iv) profiles (personal details, grades and courses) and (v) help and support (FAQ and Feedback).

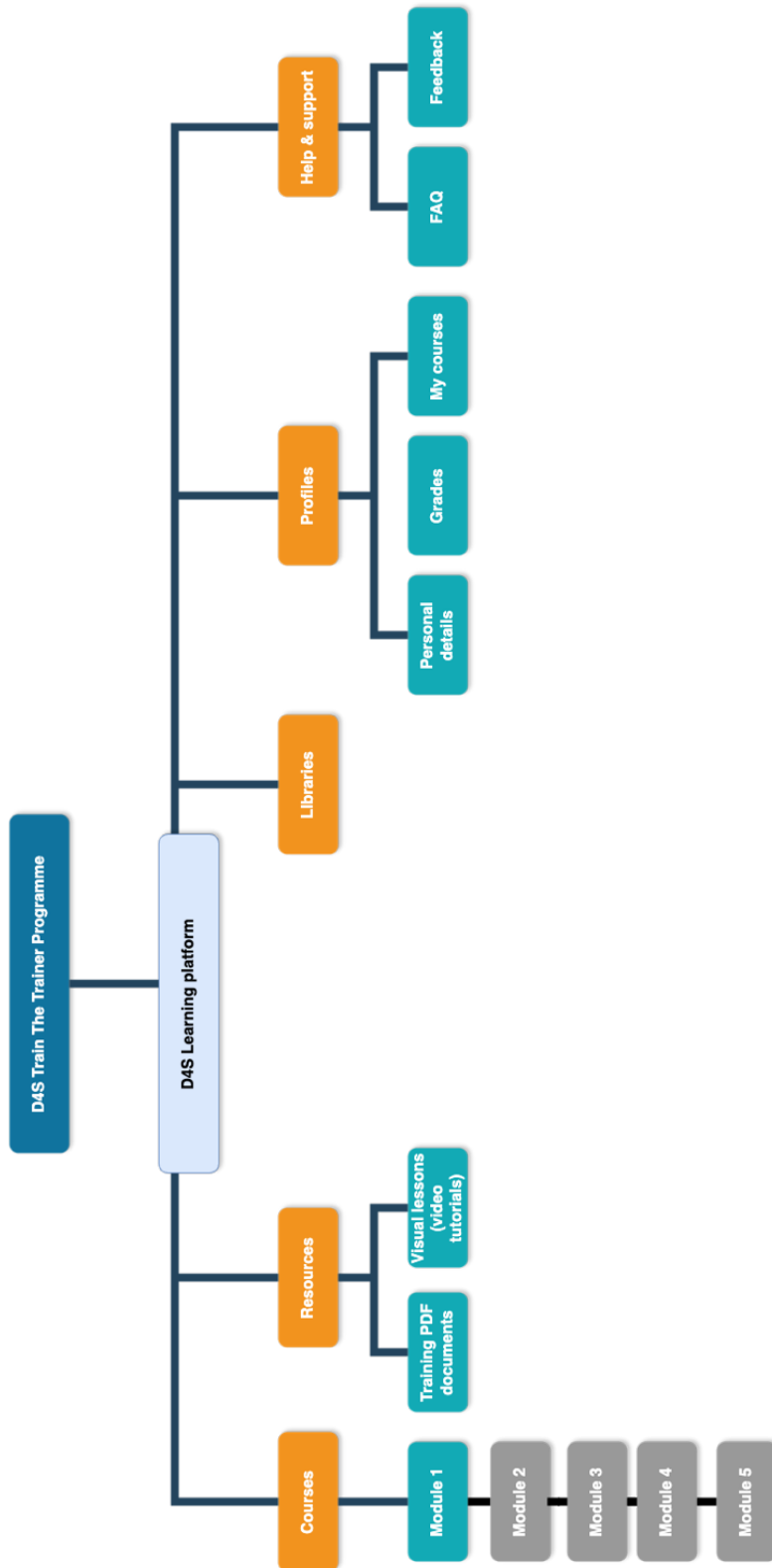


Fig.2. The Digital4Security TOT programme architecture.

Moodle platform presentation

The TOT programme will use the Moodle LMS platform. To showcase this we have created some mockups. The mockup for the landing page of the LMS platform is show in Fig. 3.

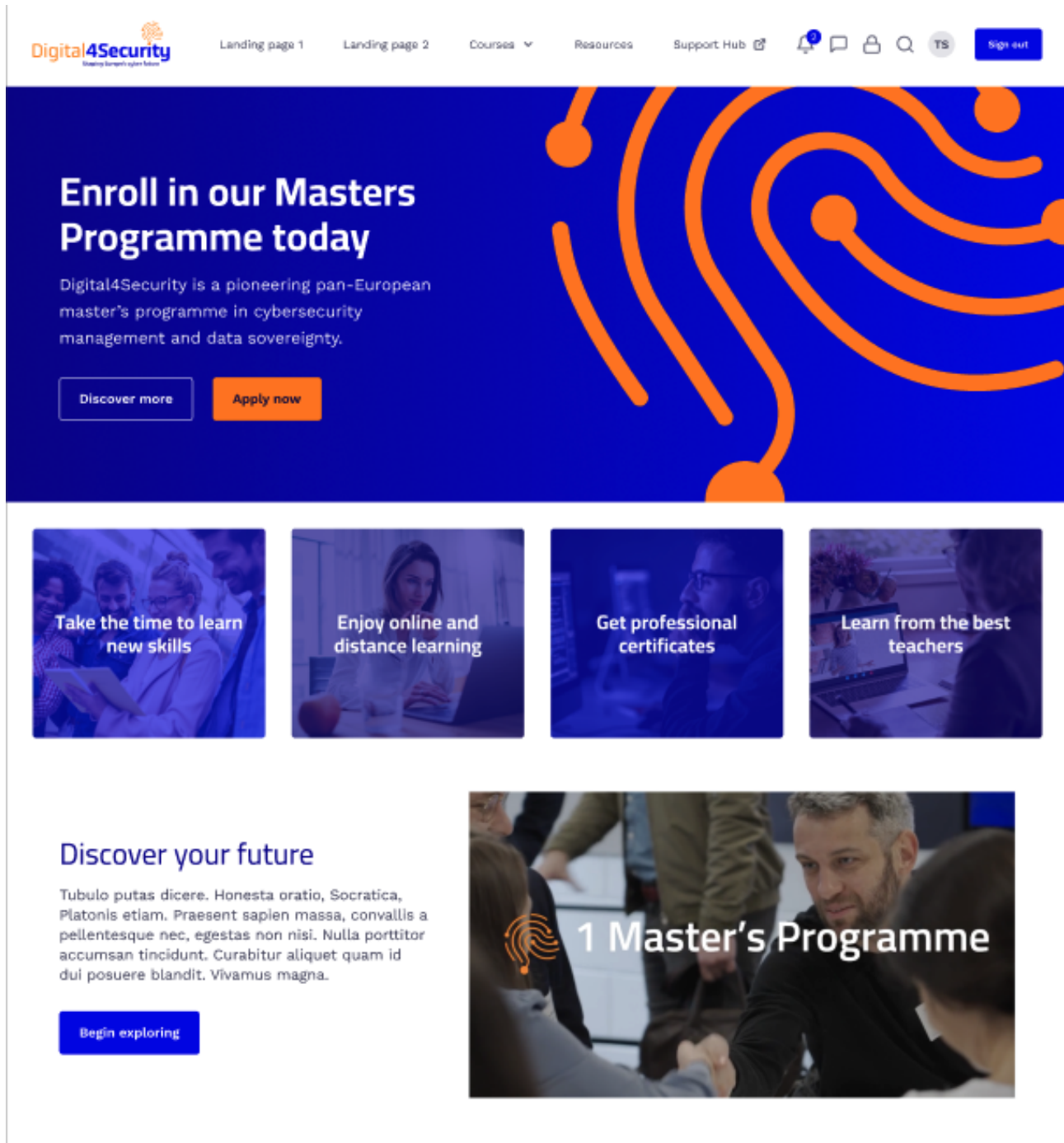


Fig.3. UI design mock-up of the proposed Moodle LMS homepage.

The TOT program will be composed of 5 modules. For these modules, the LMS platform will be presented in similar fashion as presented in the Fig.4.

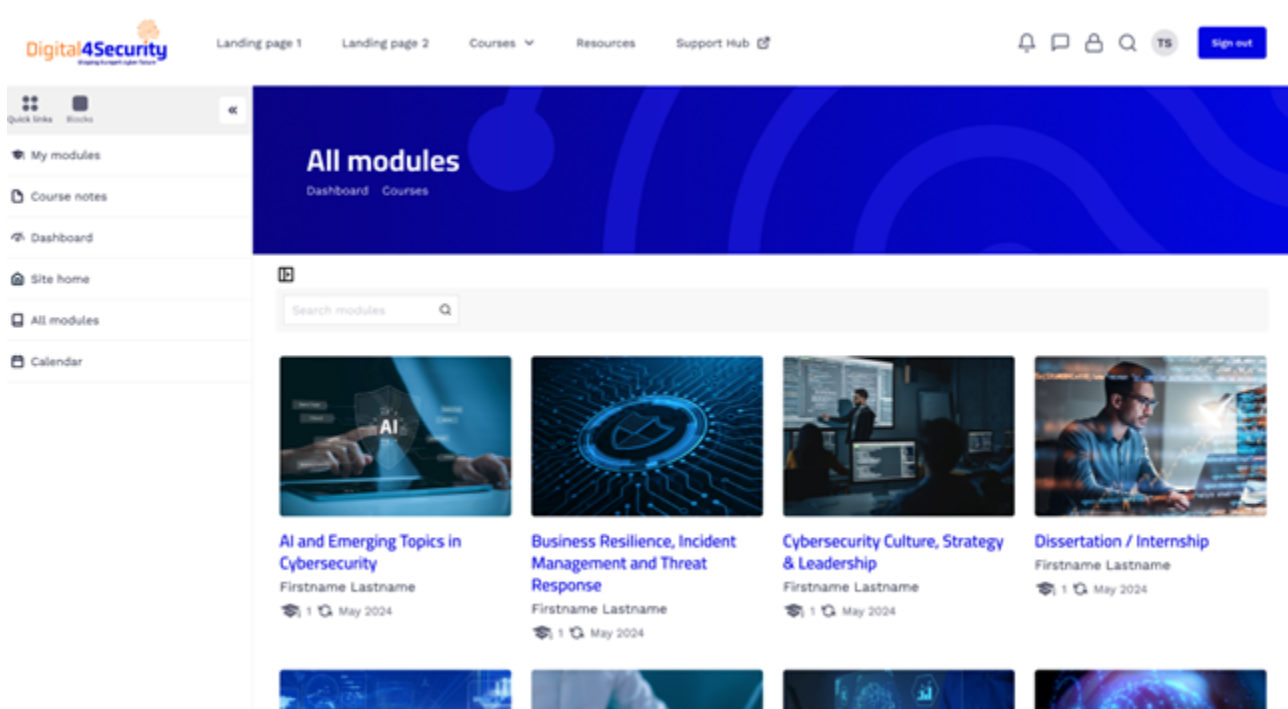


Fig. 4. UI design of how Moodle will display when TOT students are logged in.

Module 1: A Guide to Creating a Useful Course Using Moodle

The first module of the course introduces participants to the **HYLET Training Model**, an innovative and dynamic approach to modern education. This methodology seamlessly blends hybrid learning techniques, alternating between synchronous and asynchronous activities, to create a flexible and engaging learning environment. By combining structured, guided sessions with opportunities for self-paced exploration, the HYLET model adapts to diverse learning styles and schedules, ensuring accessibility and effectiveness for all participants.

Key Components

1. **Synchronous Activities:** These real-time sessions foster interaction and collaboration, allowing participants to engage directly with tutors and peers. Activities such as live discussions, Q&A sessions, and collaborative problem-solving exercises provide immediate feedback and support, reinforcing understanding and building a sense of community.

2. **Asynchronous Learning:** To complement live interactions, participants will engage in self-directed activities at their own pace. This includes exploring multimedia content, completing digital exercises, and reflecting on assigned readings or case studies. Asynchronous elements offer flexibility while promoting deep, independent learning.
3. **Digital Learning Platform:** All course materials, assignments, and recorded sessions are centralized on a state-of-the-art digital platform. This platform serves as a repository for resources and a hub for engagement, offering easy access to tools, progress tracking, and collaboration features.

Learning Activities and Methods

The module incorporates a rich mix of learning approaches designed to foster understanding, skill development, and practical application:

- **Tutor-Guided Sessions:** Participants work closely with expert trainers in structured environments to clarify concepts, address challenges, and receive personalized guidance.
- **Independent Work:** Learners are encouraged to explore topics in depth through assignments, research projects, and self-assessment exercises available on the platform.
- **Interactive Classroom Activities:** These sessions include brainstorming exercises, group discussions, and real-time simulations that promote active engagement and teamwork.
- **Practical Labs:** Hands-on experiences in labs or simulated environments allow participants to apply theoretical knowledge to realistic scenarios, bridging the gap between concepts and practice.
- **Real-World Applications:** Participants will tackle case studies and situational analyses that mirror actual challenges they may face in their professional contexts. These activities help them develop critical thinking and problem-solving skills while gaining practical insights into their field.

Feedback

The module is designed to support a cycle of ongoing improvement through continuous learning and iterative feedback. Key aspects include:

- **Regular Feedback Mechanisms:** Participants will receive timely and constructive feedback on their progress through quizzes, assignments, and peer evaluations. This feedback loop helps refine their understanding and enhances their performance throughout the module.
- **Collaborative Reflection:** Group debriefings encourage participants to share insights, challenges, and solutions, fostering a culture of collaborative growth.

- **Progress Tracking:** The digital platform provides real-time analytics, enabling participants and trainers to monitor achievements and identify areas for development.

This module's structured yet flexible approach ensures participants can adapt their learning journey to their individual needs and professional commitments. By integrating interactive and reflective practices, it not only enhances theoretical understanding but also ensures the practical application of knowledge in real-world scenarios. Ultimately, this foundational module equips trainers and professors with the tools and confidence to effectively implement hybrid learning strategies, setting the stage for the successful delivery of the entire course.

Materials

- HYLET Training Model PDF;
- Curriculum Framework.

Module 2: Creating a Course Using Moodle's Tools

The second module introduces trainers/professors to various tools for creating and managing digital lessons in Moodle. The course includes topics such as: (i) structuring lessons, (ii) utilizing BigBlueButton for live online classrooms, and (iii) setting up breakout rooms for group work. It also covers (i) video lesson creation, (ii) content presentations using H5P, and methods for sharing URLs and file resources. Tutorials ensure lecturers can effectively use Moodle tools, enhance student interaction, and manage multimedia-rich presentations, fostering an engaging digital learning environment.

Key components

1. **Lesson Structuring:**
 - **Organizing Learning Materials:** Structuring content into topics or modules to ensure logical flow and accessibility.
 - **Defining Learning Objectives:** Creating measurable objectives to align content with desired outcomes.
 - **Customizing Course Layouts:** Using Moodle's design features to create user-friendly and visually appealing interfaces for lessons.
2. **BigBlueButton for Live Classrooms:**
 - **Live Video Conferencing:** Delivering synchronous lessons with real-time interaction.

- **Engagement Features:** Using tools like polls, live chats, and shared notes to maintain student attention and participation.
 - **Session Recordings:** Storing recorded sessions for review and reinforcement of key concepts.
3. **Breakout Rooms for Group Work:**
- **Facilitating Collaboration:** Assigning students to small, focused groups for discussions and projects.
 - **Activity Monitoring:** Observing group progress and offering guidance to ensure meaningful collaboration.
 - **Creative Use Cases:** Employing breakout rooms for debates, role-playing, and case-study analyses.
4. **Video Lesson Creation:**
- **Content Production Techniques:** Providing guidelines for scripting, recording, and editing engaging video lessons.
 - **Multimedia Integration:** Embedding videos directly into Moodle pages for seamless access.
 - **Accessibility Considerations:** Adding captions and transcripts to ensure inclusivity.
5. **Interactive Content with H5P:**
- **Creating Dynamic Resources:** Designing quizzes, interactive videos, flashcards, and drag-and-drop exercises.
 - **Gamification Elements:** Incorporating game-like activities to make learning fun and competitive.
 - **Tracking Progress:** Using H5P's analytics to monitor student interaction and performance.
6. **Resource Sharing:**
- **File Uploads:** Adding documents, slides, and multimedia files directly to the platform.
 - **URL Integration:** Sharing links to external resources, tools, and websites relevant to the course content.
 - **Library Creation:** Organizing resources into repositories for easy reference and reuse.
7. **Student Interaction Tools:**
- **Forums and Messaging:** Encouraging discussions and communication within Moodle.
 - **Peer Review Activities:** Setting up assignments where students evaluate each other's work to foster critical thinking.
 - **Feedback Mechanisms:** Using online surveys and forms to gather student input and improve lessons.

Learning Activities and Methods

The module is designed to be a hands-on experience. Trainers spend time in a dedicated Moodle environment, experimenting with tools and techniques in a supportive setting. They practice setting up live classes, creating breakout rooms, and designing interactive quizzes.

As part of the learning process, participants engage in mock teaching sessions. These simulated scenarios allow trainers to apply their newfound skills in real-time, delivering lessons that incorporate multimedia, live discussions, and group activities. Feedback from peers and instructors helps refine their approach and build confidence.

Feedback

Feedback is a cornerstone of the module. Participants receive immediate input from instructors during live sessions, highlighting strengths and identifying areas for improvement. Peer evaluations provide another layer of constructive feedback, as trainers learn from one another's experiences and ideas.

Materials:

- Video Lessons tutorial;
- How to Create a Lesson Guide;
- Creating a BigBlueButton activity tutorial;
- Breakout Rooms creation guide;
- H5P Tool for Moodle tutorial;
- How to Upload and Share Files guide.

Module 3: Engaging Learners with Interactive Activities

This third module fosters student collaboration and interaction through Moodle's various tools. It covers setting up chat rooms for synchronous discussions, creating breakout groups during video calls, and managing assignment submissions for grading. Teachers will also learn how to facilitate online discussions via forums and integrate digital artifacts for assignments. Additionally, the module explores polling features to engage students and assess their understanding during sessions, ensuring active participation and feedback collection.

Key components

1. **Synchronous Discussions through Chat Rooms:**

- Trainers will learn how to set up and manage chat rooms within Moodle, enabling real-time discussions among students.

- Practical tips will be provided on moderating discussions, keeping them focused, and encouraging quieter students to participate actively.
- Scenarios such as Q&A sessions, collaborative brainstorming, and peer feedback activities will be explored.

2. **Breakout Groups During Video Calls:**

- Participants will practice creating and managing breakout groups using tools like BigBlueButton.
- Trainers will explore strategies to design effective group activities, such as problem-solving exercises, role-playing, or peer tutoring.
- Emphasis will be placed on monitoring and guiding breakout sessions to ensure productivity and learning outcomes.

3. **Assignment Management for Grading:**

- The module includes step-by-step guidance on setting up assignment submissions within Moodle, detailing options for document uploads, video presentations, or other digital formats.
- Trainers will explore how to streamline grading with rubrics, inline feedback, and automatic scoring features for quizzes.
- Practical exercises will focus on managing deadlines, offering personalized feedback, and tracking student progress.

4. **Facilitating Online Discussions via Forums:**

- Moodle forums provide a versatile space for asynchronous discussions. Trainers will learn to create thought-provoking discussion prompts and monitor student contributions effectively.
- Best practices for fostering a respectful and collaborative online community will be highlighted, including how to handle disagreements constructively.

5. **Integrating Digital Artifacts in Assignments:**

- This section covers how students can submit creative work such as videos, infographics, and slide presentations as part of their assignments.
- Trainers will explore ways to integrate multimedia projects into the curriculum, providing students with opportunities to express their understanding creatively.

6. **Using Polling Features for Engagement and Feedback:**

- The module introduces tools for creating live polls and surveys during sessions to gauge student understanding or gather opinions.
- Trainers will learn how to use poll results to adapt lessons in real time, ensuring clarity and addressing knowledge gaps.
- Examples of using polls to spark discussions or guide group decisions will also be shared.

Learning Activities and Methods

The module's learning activities are designed to provide trainers with hands-on experience in using Moodle's collaboration tools effectively. Participants begin with simulated collaboration exercises, where they step into the role of students in mock group projects. These exercises, held in breakout rooms, allow trainers to practice creating and managing small group discussions, brainstorming sessions, and collaborative problem-solving activities. By experiencing the process firsthand, trainers gain a deeper understanding of how to guide and support student interactions within these spaces.

Interactive forum design is another focal point of the module. Trainers learn to craft discussion prompts that inspire critical thinking and active participation. They moderate these forums, managing diverse perspectives and fostering a respectful and engaging dialogue. This practice is enhanced by peer feedback, where trainers exchange insights on each other's approaches, helping to refine their skills.

Feedback

Feedback is woven into every aspect of the module, creating a supportive environment where trainers can learn and grow. During live sessions and breakout room exercises, instructors provide real-time coaching, offering constructive advice on discussion facilitation and activity management. This immediate feedback helps trainers refine their techniques and build confidence in using Moodle's collaborative tools.

Peer observations add another layer of feedback. Trainers take turns evaluating each other's use of forums, chat tools, and breakout rooms. This collaborative approach fosters a sense of community and provides diverse perspectives on effective teaching practices.

Participants gain valuable insights from their peers' experiences, enabling them to adapt and enhance their own methods.

Materials

- Video Lessons tutorial;
- How to create a chat;
- Groups during a videocall tutorial;
- Assignment activity setup guide;
- Digital artifacts section creation tutorial;
- Forum activity creation tutorial;
- How to use polling in the BigBlueButton Guide.

Module 4: Creating Assessment

This fourth module is dedicated to creating practical assessments and gathering feedback in Moodle. It covers creating quizzes, from simple multiple-choice tests to complex self-assessment tasks. Trainers/professors will also learn to design rubrics for criteria-based grading, collect custom feedback through surveys, and build digital portfolios for students to showcase their work. Tutorials guide participants on leveraging these tools to provide detailed feedback and enhance the learning experience through structured evaluations.

Key components

1. Creating Quizzes

- Participants will learn to design various types of quizzes, ranging from straightforward multiple-choice questions to more advanced self-assessment tasks.
- Practical exercises will showcase how to structure quizzes to align with course objectives and challenge different levels of student understanding.
- Tips for utilizing question banks, randomization options, and timed assessments will help trainers create dynamic and fair quizzes.

2. Designing Rubrics for Criteria-Based Grading

- This component introduces trainers to rubric design, enabling them to establish clear, objective criteria for evaluating student work.
- Participants will practice creating rubrics tailored to specific assignments, ensuring transparency and consistency in grading.

- Case studies will demonstrate the effectiveness of rubrics in promoting student understanding of expectations and areas for improvement.

3. Building Digital Portfolios

- Trainers will learn to create digital portfolios where students can compile and showcase their work, reflecting on their learning journey.
- Tutorials will cover setting up portfolio templates, encouraging creativity, and using portfolios as a formative assessment tool.
- Emphasis will be placed on how portfolios can foster student ownership of their learning and serve as evidence of skill development.

4. Providing Detailed Feedback

- The module highlights techniques for giving constructive, detailed feedback using Moodle's grading tools.
- Trainers will explore features like inline comments, annotated feedback on uploaded files, and personalized video or audio feedback.
- Strategies for balancing positive reinforcement with constructive criticism will be discussed, ensuring students feel supported in their progress.

Learning Activities and Methods

The module's learning activities are thoughtfully designed to immerse trainers in the practical use of Moodle's assessment and feedback tools. Trainers begin with a hands-on workshop focused on quiz creation. Here, they explore how to design quizzes ranging from basic multiple-choice questions to more intricate self-assessment tasks. Working in small groups, participants draft and test quizzes, simulating the student experience to refine their approach. This collaborative environment helps trainers identify best practices for crafting engaging and effective assessments.

The module also encourages creativity through portfolio-building exercises. Trainers create mock digital portfolios, experimenting with multimedia integration and reflective prompts. This activity not only familiarizes them with the technical aspects of portfolio creation but also highlights how portfolios can showcase student achievements and foster deeper learning.

Lastly, trainers practice delivering feedback on mock assignments. Using Moodle's feedback tools, they provide inline comments, attach audio or video messages, and annotate documents. Role-playing scenarios allow trainers to exchange ideas on effective

feedback techniques, ensuring their comments are constructive, encouraging, and actionable.

Feedback

Feedback is seamlessly integrated throughout the module, offering trainers multiple opportunities to learn and improve. During live sessions, instructors provide real-time guidance, addressing questions and suggesting adjustments to quiz designs, rubric criteria, and portfolio layouts. This immediate feedback ensures that participants feel supported as they explore Moodle's features.

Peer review is another cornerstone of the module. Trainers evaluate each other's work, offering constructive feedback on assignments and activities. This collaborative process fosters a sense of community and provides diverse perspectives, helping trainers refine their methods. For instance, participants might exchange ideas on how to frame rubric criteria or adjust the tone of feedback to be more encouraging.

Materials

- Video Lessons tutorial;
- Quiz activity creation guide;
- Rubric creation tutorial;
- Feedback activity setup tutorial;
- Digital portfolio creation guide.

Module 5: Teaching Techniques and Models

This fifth module introduces modern teaching models that enhance student engagement and learning. It covers methodologies such as the EAS Method, which emphasizes microlearning and structured activities, and the flipped classroom approach, which shifts traditional teaching dynamics. It also delves into collaborative learning, gamification, case studies, brainstorming, and debriefing techniques. Trainers/professors will explore practical examples and strategies to foster active learning, critical thinking, and group collaboration, ensuring an interactive and student-centered educational experience.

Key components

1. **EAS Method: Structured Microlearning.** The EAS (Episode of Situated Learning) Method is at the core of the module's emphasis on structured learning. This approach involves breaking down content into microlearning units—short, focused activities tailored to specific learning goals.

2. **Flipped Classroom Techniques.** The flipped classroom model shifts the focus from traditional lectures to interactive, student-driven learning. Trainers learn to prepare pre-class materials, such as video lectures or readings, which students review independently.
3. **Collaborative Learning.** This component focuses on fostering teamwork and peer-to-peer learning through collaborative projects and group discussions.
4. **Gamification in Education.** Gamification integrates game elements into the learning process to increase engagement and motivation.
5. **Case Studies and Real-World Applications.** This component emphasizes the use of real-world scenarios to develop students' critical thinking and problem-solving skills. Trainers learn how to design and present case studies that encourage students to analyze, evaluate, and propose solutions to realistic challenges.
6. **Brainstorming and Creative Thinking.** Brainstorming techniques are introduced as tools for generating ideas and fostering creative thinking. Trainers explore ways to guide brainstorming sessions, encouraging student participation and collaboration.
7. **Debriefing and Reflection.** Debriefing activities help students connect their learning experiences to broader concepts. Trainers are taught to facilitate reflective discussions that encourage students to evaluate their performance, identify key takeaways, and plan for future learning.

Learning Activities and Methods

The learning activities are crafted to immerse trainers in the practical application of modern teaching methodologies.

Participants begin with an interactive session on the EAS Method, which focuses on microlearning and structured activities. Trainers are guided through the creation of bite-sized, focused learning segments that are both engaging and easy to integrate into lesson plans. They then practice structuring lessons using this method, ensuring each segment builds progressively towards mastering larger concepts.

Next, the module introduces the flipped classroom approach, encouraging trainers to rethink traditional teaching dynamics. Trainers are tasked with designing pre-class content, such as short video lectures or reading assignments, which students complete independently. During in-class activities, participants simulate facilitation of interactive discussions and problem-solving sessions, gaining firsthand experience in leveraging class time for deeper engagement.

The exploration of collaborative learning emphasizes the value of teamwork and peer-to-peer interactions. Trainers participate in group projects, role-playing as students to experience the challenges and benefits of collaboration. Practical exercises include setting up collaborative activities in Moodle, such as group assignments, discussion forums, and peer evaluations.

In the gamification segment, trainers experiment with incorporating game elements into their teaching. Activities include designing quizzes with reward systems, creating leaderboards, and brainstorming interactive challenges that align with educational objectives. Trainers also reflect on the balance between competition and inclusivity to ensure all students remain motivated.

Case studies and brainstorming sessions are used to illustrate real-world problem-solving and idea generation. Trainers work in small groups to analyze complex scenarios, develop actionable solutions, and present their findings. These activities are followed by debriefing exercises, where participants learn to guide reflective discussions that help students connect their experiences with broader learning outcomes.

Feedback

Feedback plays an important role in this module, serving as a continuous loop for improvement and adaptation. Trainers receive real-time guidance from instructors during activities, ensuring they can refine their application of modern teaching models. Peer feedback fosters collaboration, as participants review and critique each other's lesson plans, gamified elements, and group activities, offering diverse perspectives and practical suggestions. Additionally, simulated student feedback helps trainers understand the learner's perspective, enabling them to tailor their strategies for maximum engagement. Reflective exercises further encourage trainers to assess their performance, identify strengths, and pinpoint areas for growth. This multidimensional approach ensures that feedback not only enhances individual skills but also fosters a culture of continuous learning and innovation.

Materials

- EAS Method guide PDF;
- Teaching Techniques;
- Flipped classroom;
- Gamification;

- Collaborative learning;
- Case study;
- Brainstorming;
- Debriefing.



Train the Trainer Programme Agenda

As designed, the TOT (Train-the-Trainer) program ensures that all trainers and teachers who have adopted this program are fully prepared with the digital platform before the start of each course module they will teach using the online platform.

The TOT program considers that student training must be carried out independently and asynchronously, following the modules on the Moodle platform in the specified order (from the first module to the last module, from 1 to 5 in the case of our master's degree).

Each session of the TOT program covers essential pedagogical strategies and models, including the EAS method, flipped classroom and collaborative learning. The core elements of the program are centered on:

- Defining the specific objectives and needs of each module;
- Developing the curriculum/training framework and highlighting specific elements;
- Developing the specific content of each module;
- Training methods for teachers and learners;
- Selecting trainers for each course based on specific competencies;
- Developing the trainer's skills in relation to the online platform of the program;
- Certification of lectures within the modules;
- Collection of student feedback.

Progress for each module will be monitored, and completion of the course will be certified only after all materials have been fully engaged, covered and assumed by the teachers.

This process ensures that the trainer/teacher is well prepared and equipped with specific pedagogical and didactic methods and strategies to optimize the teaching and learning process in online and hybrid environments.

In the proposed schedule each activity is presented, M1 is considered to be January 2025.

| Activity | M1 | M2 | M3 | M4 | M5 |
|---|-----------|-----------|-----------|-----------|-----------|
| Define objective and needs | | | | | |
| Curriculum development/Training framework | | | | | |
| Content development | | | | | |
| Training methods | | | | | |
| Trainer selection for every course | | | | | |
| Trainer Skills development | | | | | |
| Certification of lectures | | | | | |
| Collecting feedback | | | | | |



Legal Disclaimer

The European Commission's support to produce this publication does not constitute an endorsement of the contents, which reflect the views of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Project 101123430 — Digital4Security — DIGITAL-2022-SKILLS-03

Copyright © 2023 by Digital4Security Consortium