

# Digital Training for European Welding Inspectors

To enhance training capabilities of **VET teachers** and **trainers** and develop digital educational materials to support the **teaching** and **learning** in the field of welding inspections.

Newsletter #2, February 2023

## GET TO KNOW D-EWI PROJECT

D-EWI "Digital Training for European Welding Inspectors", is an **Erasmus+** project for cooperation in the field of Vocational Education and Training. The D-EWI project is coordinated by the **Romanian National R&D Institute in Welding and Material Testing - ISIM** - and the partnership is made up of **8 different partners**.



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## GUIDE FOR TEACHERS AND VET TRAINERS ON IMPLEMENTATION AND USAGE OF E-LEARNING DIGITAL TOOLS

During the **first year of D-EWI project**, improvements were made by the partnership. Educational materials, including a detailed guide, PowerPoint presentations and videos were prepared for the **teachers** and **VET trainers** interested about the usage of e-learning digital tools. Besides the lecture lectures of the **Digital Training of the European Welding Inspector** these educational materials also beneficial for those teachers and trainers who are aimed to develop themselves in e-learning. The prepared educational materials were summarized in a **well organized e-learning platform** which will be openly available within the e-learning open courses of the University of Miskolc.

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This Guideline itself was prepared as part of **training materials** developed for the C1 - Short-term joint staff training programme of the D-EWI project. The developed e-learning training course primarily focuses on **using e-learning tools** for the purpose of facilitating high end e-learning educational courses to professionals that work in the Welding inspection industry. At the beginning of the project a **survey (Training Needs' Analysis)** was performed among the potential participants about existing skill gaps in e-learning and learners' expectations.

Based on the feedback the overall objective of this **training programme** was defined as follows:

- The **main focus** is offering a pragmatic and practical support for trainers to get familiar with the selected e-learning platform, the Moodle Learning Management System. As the most appropriate methodology for meeting this objective, in most of the time of the 24 hours training programme Moodle tools by presentations and demonstrations were introduced, showing the process of setting up and application of these tools. During the face-to-face training, (and also beyond it) participants had access to a practice-area, a "sandbox" Moodle course, where they gained personal experiences by testing these tools in teachers' role;
- In addition, an **important aim of the course** is to encourage a change of mindset among the participants, so that they recognise the importance of modernising education beyond the digitalisation and use of ICT tools. Therefore, it was aimed to support the trainers in their efforts to enrich their pedagogical knowledge and to use a variety of methodological approaches to improve the effectiveness of learning processes of their students. The introductory lectures on the first day of the training programme and the first three chapters of this booklet serve these purposes, as a complementary training material, focusing on more generic aspects and approaches. This mindset-shaping, thought-provoking overview of recent educational developments and trends is complemented by reference lists, a collection of mostly online resources and useful links, a glossary of terms;
- The **fourth chapter of the prepared Guide** offers a short overview of the Moodle tools, as a starting point for educators to find the direction for the further steps – what tools can be used for different purposes. These tools were introduced in detail in the series of ppt presentations during the 3-day course.

### The Guide has the following content:

#### Educational Innovation:

- Educational technology;
- Pedagogy/andragogy;
- Accessibility and openness.

#### Improving effectiveness of learning:

- Generation theory and brain dominance (features of Gen X, Y, Z);
- Essential skills and teaching methodology (left/right brain dominance);
- Motivation and gamification in case of different learning scenarios.

#### Innovative tools for synchronous and asynchronous on-line learning support:

- Video-conferencing (Google Meet, MS Teams, Zoom, comparison of features);
  - Collaborative whiteboard applications (MIRO, Mural).

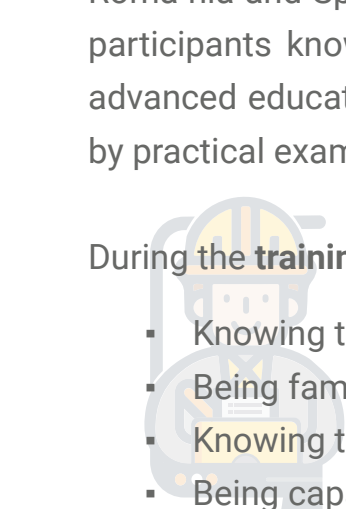
#### Quick Guide for Moodle:

- Short introduction for Moodle;
  - Roles in Moodle;
- Moodle tools and functions.

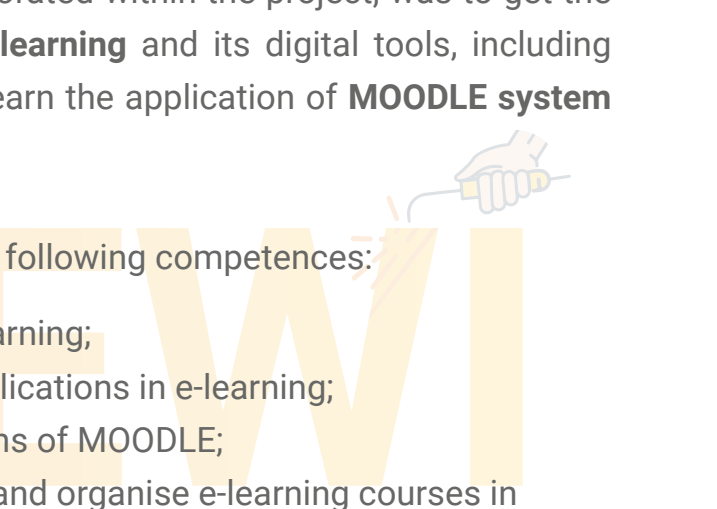
#### Annexes:

- Glossary;
- Training Needs Analysis;
- Excerpts from D-EWI project partners' research report.

It is hoped that **reading** this Guide will be inspiring to the **course participants** to not only teach **up-to-date** content, but also to pay **special attention** to the use of modern pedagogical **methods** and **tools** in their teaching activities.



- I have no any experiences with any learning management system
- I used Moodle as a learner
- I use Moodle as a teacher, but only for some very simple functions.
- I use versatile functions in Moodle system as a teacher.



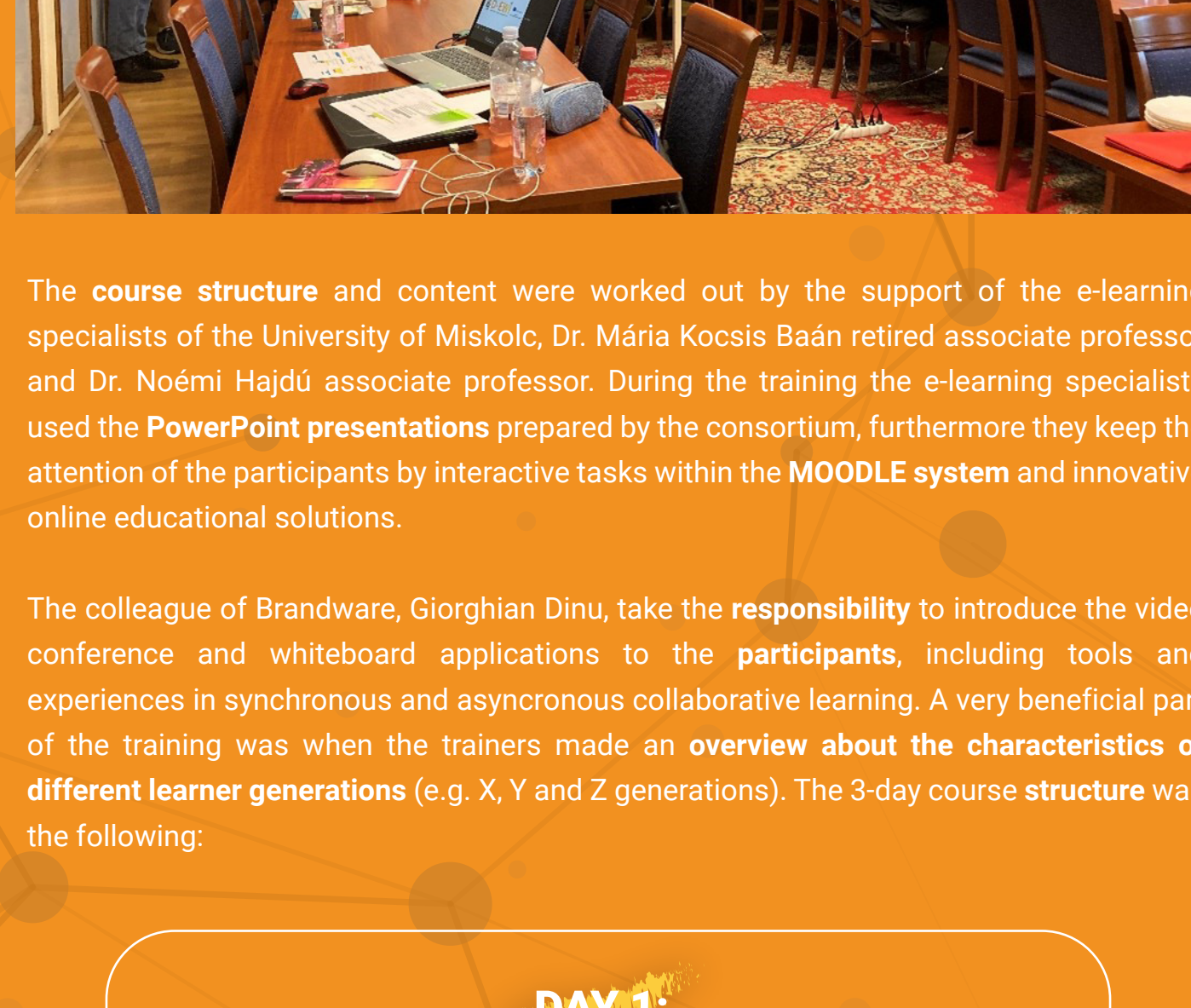
## D-EWI | SHORT-TERM JOINT STAFF TRAINING EVENT AT UNIVERSITY OF MISKOLC (JULY 2022)

Between 4-6th of July 2022 the **University of Miskolc Institute of Material Science and Technology** hosted a short-term joint staff training about digital e-learning methods (C1) in Hungary. The e-learning specialists of the university and specialist of Brandware Media organized a **24-hour training** for the thirteen participants from Hungary, Italy, Portugal, Romania and Spain. The aim of the training, elaborated within the project, was to get the participants know about the **fundamentals of e-learning** and its digital **tools**, including advanced educational methods, furthermore, to learn the application of **MOODLE system** by practical examples.

During the **training** the **participants** could gain the following competences:

- Knowing the methodological basics of e-learning;
- Being familiar with the digital tools and applications in e-learning;
- Knowing the structure, tools and applications of MOODLE;
- Being capable to create learning materials and organise e-learning courses in their own field using digital e-learning tools

## University of Miskolc Institute of Material Science and Technology



The **course structure** and content were worked out by the support of the e-learning specialists of the University of Miskolc, Dr. Mária Kocsis Baán retired associate professor and Dr. Noémi Hajdú associate professor. During the training the e-learning specialists used the **PowerPoint presentations** prepared by the consortium, furthermore they keep the attention of the participants by interactive tasks within the **MOODLE system** and innovative online educational solutions.

The colleague of Brandware, Giorghian Dinu, take the **responsibility** to introduce the video conference and whiteboard applications to the **participants**, including tools and experiences in synchronous and asynchronous collaborative learning. A very beneficial part of the training was when the trainers made an **overview about the characteristics of different learner generations** (e.g. X, Y and Z generations). The 3-day course **structure** was the following:

### DAY 1:

- Defining the learning environment, classroom management;
  - Organisation and course management;
- Communication via the e-learning framework.

### DAY 2:

- Setting up student groups and define tasks;
- Assessment by quiz/defining grades and feedback to students;
- Active learning/delivery of essays and feedback.

### DAY 3:

- Monitoring attendance and participation;
- Monitoring and assessment of student progress;
- Educational innovation: flipped classroom on openness and accessibility;
  - Evaluation of the course.

Related to the **course topics** all of the necessary e-learning tools of MOODLE have been introduced to the participants. Based on the course the **consortium members** are ready to work on the advanced training materials related by the utilization of e-learning methods to the planned digital training on European Welding Inspector (EWI). Besides the training it was also a good occasion to get familiar with the **professional activities** of the Institute of Material Science and Technology. On behalf of the hosting organization Dr. Marcell Gáspár associate professor gave a **detailed overview** about the institution and its professional fields related to welding, metal forming, heat and surface treatment, and tribology. Therefore, the participants had the chance to visit the **welding and materials testing laboratory** of the university.

At the end of the course an online exam was organized to the participants via MOODLE, which was **successfully passed** by all participants, so they could get the certificate issued by the University of Miskolc. In order to get the right for issuing certificate the University of Miskolc registered the training at the national authority with the following official name: Methodology and application of digital e-learning tools in technical higher education. After the final exam the participants also **evaluated** the course structure, educational materials and trainer's activity, which resulted general positive feedback for the whole course.

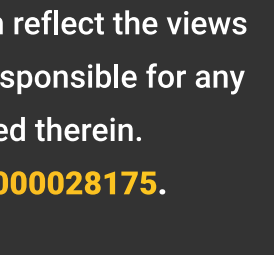
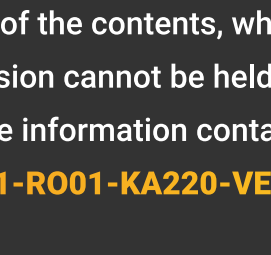
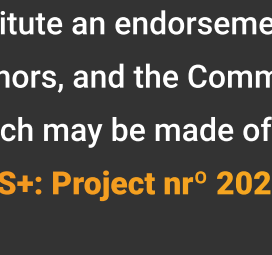
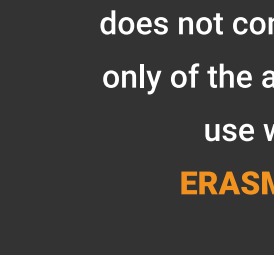
Based on some beneficial comments the **training** and its **materials** were further developed in July before getting their final version.

Hopefully the developed training with its training materials will be useful for the trainers of the **European Welding Inspectors** trainings and also for other lecturers who are aimed to train themselves about e-learning. After the project the training will be publicly available at the **e-learning platform** of the University of Miskolc within the open courses.

After the **daily trainings** some common cultural activities were organized therefore the participants could visit the sights of Miskolc including the city centre and the Cave Spa.

[WEBSITE](#)

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