



WP2 – MODULE DESCRIPTION

INSTRUCTIONAL DESIGN & ENGAGEMENT TOOLS

TOPICS:

INSTRUCTIONAL DESIGN FOR ONLINE AND BLENDED LEARNING
ENGAGEMENT TOOLS FOR FACE-TO-FACE AND BLENDED LEARNING

MODULE DESIGNED BY:

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WITHIN WHICH TRAINING?

- TT1 (8 hours of F2F training)
- MOOC (2 weeks of approximately 5-7 hours of learners' work per week)
- TT2 (8 hours of F2F training)

DURATION WITHIN THE FRAMEWORK OF THE TRAINING

- One full day in TT1 and another full day in TT2

GENERAL INFORMATION: (outline of the module)

This module addresses two topics that are relevant in the context of educational innovation. The first of the two topics refers to the instructional design of activities and courses in online and blended learning scenarios, stressing the application to the contexts of MOOCs (Massive Open Online Courses), SPOCs (Small Private Online Courses) and flipped classrooms. The second topic refers to the use of engagement tools in face-to-face and blended learning scenarios to encourage learners' participation and interaction.

Overall, the module will begin with a first face-to-face session (TT1) in which an introduction will be made to the evolution of education from a technological point of view, going from Education 0.0 to Education 3.x. Then, the digital competences needed by today's teachers will be discussed, taking as the basis the European Framework for the Digital Competence of Educators (DigCompEdu). A first assessment on the current digital competences of the attendees to the first face-to-face session will be conducted using engagement tools (e.g., Socrative, Mentimeter, Padlet, Kahoot!, etc.) to identify the competences that need to be reinforced during the training sessions.



After this introduction, the core content of the first topic will be presented, focusing on a general overview of the instructional design for online and blended learning, and doing a hands-on collaborative activity with a first top-level instructional design for a MOOC, using the MOOC Canvas. Next, the three key components of the MOOC will be introduced (e-videos for content delivery, e-quizzes for knowledge and skills and assessment and e-forums for community building); these components could be eventually used not only in MOOCs, but also in other (non-massive and non-open) online courses. Finally, a first implementation of the course designed will be developed through another hands-on activity in the Open edX platform, whose functionality and interface resemble those of the Edge platform by edX, in which the online part between teacher training sessions will be developed. It is interesting to mention that the second topic on engagement tools will be illustrated during the face-to-face session with examples of intertwined interactive activities that will make use of some of these engagement tools.

The online part between face-to-face sessions will delve into some of the elements discussed in TT1, including good and bad practices in the instructional design of online and blended courses, the correct use of intellectual property when creating educational content or the use of additional engagement tools for face-to-face and blended learning.

The second face-to-face session (TT2) will discuss the challenges of Education 4.0, where we are now, although many of the related advances have not yet been widely adopted by educational institutions. Specifically, this second face-to-face session will address the topic of learning analytics through visualizations and dashboards for monitoring student progress and analyzing the use of educational contents in online and blended scenarios, with the ultimate purpose of redesigning an activity or a whole course to make them more effective in terms of student achievement. In addition, this second face-to-face session will present other solutions both commercial and non-commercial, that are currently being applied in K-12 and Higher Education for content management and monitoring of student work. Finally, in this second face-to-face session, the work done by teachers for the redesign of their course in an innovative way, making use of the lessons learned from this module will be presented and evaluated.

CONTENT OF THE MODULE:

TT1:

- 1) From Education 0.0 to Education 3.x
- 2) Digital competences for 21st century teachers
- 3) Online and blended learning: MOOCs, SPOCs and flipped classroom
 - 3.1) Designing a MOOC/SPOC
 - 3.2) Developing a MOOC/SPOC (Part I): e-videos
 - 3.3) Developing a MOOC/SPOC (Part II): e-quizzes
 - 3.4) Developing a MOOC/SPOC (Part III): e-forums



3.5) Implementing a MOOC/SPOC

4) Engagement tools for face-to-face and blended learning

TT2:

- 1) From Education 3.x to Education 4.x
 - 2) Learning Analytics for decision making in the instructional design
 - 2.1) Dashboards aimed at teachers, students and policy makers
 - 2.2) Ethical issues
 - 3) Example solutions for Education 4.x
- * Presentation and discussion of the practical activity by the attendees

DETAILED DESCRIPTION

This module covers the three main types of scenarios in which teachers are currently involved: face-to-face education, online education and blended education. The part that refers to instructional design focuses mainly on online and blended education, since teachers are already used to face-to-face education. However, special emphasis is put on enriching face-to-face scenarios through the use of engaging tools to which students can access through their mobile devices for different purposes, such as to provide feedback to the teacher on how the class is running, to ask questions, or to assess their level of knowledge and competences.

This module also tries to make teachers more aware of the digital skills they need to develop to meet the needs of students arriving at the university today. The DigCompEdu will be used as a reference framework so that teachers can make a diagnosis to detect their weakest digital skills. Tips and guidelines will be offered throughout this module on how teachers can increase their proficiency in these skills.

This module combines the presentation of key topics by the instructors with interactive individual activities and collaborative group activities. It is expected that participants in this module will be able to complete the full cycle of first face-to-face session (TT1), online content (MOOC), and second face-to-face session (TT2) for greater achievement.

RELATION TO THE OTHER MODULE(S)

This module is related to the module "How to be an innovative teacher", which introduces the TPACK model and the flipped classroom. Nevertheless, unlike the above-mentioned module, this module puts special emphasis on problems arising from the implementation of the flipped classroom, and some of the solutions found to these problems. In addition, this module also puts special emphasis on the necessary digital competences an innovative teacher needs, using DigCompEdu as the reference framework.



This module is also related to the module "Innovative Assessment Systems & E-Portfolios" as one of the parts of this module addresses assessment systems. Nevertheless, the focus is different since this module analyzes assessment systems from the perspective of online and blended learning.

LEARNING OBJECTIVES

Learning objectives are aligned with the six levels of the Bloom's Taxonomy: remember, understand, apply, analyze, evaluate, and create.

OVERALL MODULE

Participants are able to *remember and understand* the most important technological advances which lead to a change of paradigm from Education 0.0 to Education 4.x.

Participants are able to *remember and understand* the most important digital skills for a teacher, according to the DigCompEdu framework.

Participants are able to *apply* existing tools and platforms to enrich their syllabus in online, blended and face-to-face learning scenarios.

Participants are able to *analyze and (self-)evaluate* their level of proficiency for each of the most important digital skills, according to the DigCompEdu framework.

Participants are able to *analyze and evaluate* the results of innovative syllabus developed

Participants are able to *create* an innovative syllabus considering their digital skills whose proficiency has improved in this module, as well as some of the existing tools and platforms addressed in this module.

INSTRUCTIONAL DESIGN FOR ONLINE AND BLENDED LEARNING

Participants are able to *remember and understand* the differences between MOOCs, SPOCs and flipped classroom.

Participants are able to *apply* existing frameworks and templates to go from the top-level design of an online or blended course to the lower levels (learning sequences and components).

Participants are able to *analyze and evaluate* the results of the online and blended learning courses implemented through the use of learning analytics tools.

Participants are able to *create* complete online and blended learning courses, including their components (e-videos, e-quizzes, e-forums).



ENGAGEMENT TOOLS FOR FACE-TO-FACE AND BLENDED LEARNING

Participants are able to *remember* some of the most popular engagement tools used in the module.

Participants are able to *understand* the purpose by which each engagement tool can be useful in a certain educational scenario.

Participants are able to *apply* some of the engagement tools in specific educational scenarios where they can be useful for students.

Participants are able to *analyze* the result of using engagement tools in educational scenarios getting feedback from students and combining this feedback with the data provided by the engagement tools.

Participants are able to *evaluate* the innovative learning scenarios they have implemented using engagement tools and redesign and improve them in the future.

Participants are able to *create* an innovative syllabus which makes use of some of the existing engagement tools addressed in this module.

TEACHING AND LEARNING ACTIVITIES

PART 1: INSTRUCTIONAL DESIGN FOR ONLINE AND BLENDED LEARNING

Introduction to the topic by the lecturer using power point slides

Individual interactive activities using engagement tools

Group work to reflect and discuss on the top-level design of an online course

Group work to reflect and discuss on the low-level components of an online course

Group work to implement the online course designed.

PART 2: ENGAGEMENT TOOLS FOR FACE-TO-FACE AND BLENDED LEARNING

Introduction to the topic by the lecturer using power point slides

Individual interactive activities using engagement tools

Group work to design a flipped classroom. The work done in Part 1 will serve for the online part of the flipped classroom. Engagement tools discussed in this module should be incorporated in the face-to-face part of the flipped classroom

ASSIGNMENTS (IF ANY) – in relation to the teaching and learning activities



This module contains a transversal activity that is the design of an innovative syllabus, making use of the contents worked on during this module, including the instructional design on online and blended learning scenarios and the use of engagement tools in face-to-face scenarios. This task will be presented in TT2.

PLANNING WITHIN THE FRAMEWORK OF THE TRAININGS (TT1 and TT2)

Both Carlos Delgado Kloos and Carlos Alario-Hoyos will participate in TT1 and TT2. Other colleagues from UC3M may also be involved in TT1 and TT2 as additional support for some of the activities.

LITERATURE/REFERENCES

Alario Hoyos, C., Pérez Sanagustín, M., Cormier, D., & Delgado Kloos, C. (2014). Proposal for a conceptual framework for educators to describe and design MOOCs, *Journal of Universal Computer Science*, 20(1), 6-23.

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Bonk, C. J., & Graham, C. R. (2012). *The handbook of blended learning: Global perspectives, local designs*. John Wiley & Sons.

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Reich, J., & Ruipérez-Valiente, J. A. (2019). The MOOC pivot. *Science*, 363(6423), 130-131.

Sharples, M. (2019). *Practical Pedagogy: 40 New Ways to Teach and Learn*. Routledge.

ASSESSMENT METHODS, TYPE OF EVALUATION AND WEIGHT (if any)

None.

ASSESSMENT CRITERIA

None.



IMPORTANT CONTACT INFORMATION

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APPENDICES OVERVIEW (if any)

None.

MATERIALS TO BE USED DURING THE TRAINING:

To be published.

SPECIFICS FOR THE LEARNING ENVIRONMENT SET-UP IF ANY:

- Projector + screen + WiFi
- Room with flexible distribution to work on collaborative activities.
- Participants will need to bring their own laptops for part of the TT1 activities or we would need to go to a computer lab.