OnlineHE project

A practical toolkit for integrating eLearning in Higher Education Curricula

Building the capacity of HE teaching staff, academics, and learning designers in integrating eLearning into their educational programmes





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Module 5: Best practices

Module overview

Module 5 provides examples of best practices you can apply in your eLearning lessons.

- > Name best practices for eLearning
- > Understand the working principles beyond the highlighted best practices for eLearning
- > Identify principles to design successful eLearning activities for higher education
- > Apply the principles beyond the presented best practices to new eLearning activities
- Compare and contrast common eLearning activities and behaviours to the ones classified as best practices



Module 5: Best practices

Units overview

- > Instructional Design
- > Good practice for digital and online tools/software
- > MOOC and OER
- > Guidelines for teaching, learning, and assessment



Let's think...

What do you understand "good eLearning course"?

When we try to define features of the course, we immediately focus on the development of interactivity and creativity, achievement of objectives, learning theories, and application of knowledge and skills acquired in a real-world context.

Most instructional designers use the ADDIE model, which consists of 5 stages. The stages are as follows: analysis, design, development, implementation, evaluation.





What is Instructional Design?

Instructional Design involves the development of more effective, user-friendly teaching methods, approaches and systems and it application in the professional practice.

Instructional Designer aims to implement learning theories and research in order to design, develop and implement an effective learning material that improves outcomes and efficiency of learning.

The key elements that define Instructional Design methods and guide best practice are: analysis, development and evaluation.

In the course based on the ADDIE model, we encourage learners to **learn** and **perform** or explore, discover, interpret, and collaborate.





Be careful! There is no recipe for the perfect eLearning course.





Analysis and Planning - Goal-Setting Stage

- Target audience. We identify the profile of the course participants: who are they, what knowledge and skills do they have, what motivates learners? We focus on what learners need to explore and learn.
- Study objectives and outcomes. We define clear objectives of the course: what this course aims to achieve and what results are expected. The description of the course is used as a guide. We usually use Bloom's Taxonomy to formulate learning objectives and outcomes (*see more https://bloomstaxonomy.net/*)
- **Resources**: human resources, technical resources, time, knowledge and skills, finance, support. We think about the challenges faced.
- Technologies. This is the infrastructure needed for the successful course implementation.
- Course material: what is the structure of the course, what learning resources will be used?
- Assessment: what will be the criteria and methods of evaluation?



Design (1)

- We outline a course strategy. We set tools and goals to achieve learning results.
- We outline the learner assessment methodology.
- We outline reflection methods.
- We design the course (learning objectives, content, methods, tools, time, assessment, feedback).

Remember to keep the course systematic, logical and coherent with the objectives defined at the beginning!

Create the instructional environment where learners practice what they have learn.



Design (2)

We plan the essential elements:

Objectives

Describe the main objective of the course: Outline learners' abilities: 1) _____2) _____3)...... Pedagogic methods and approaches Describe learning activities: Describe assessment methods (formative, summative): Describe platforms and tools that we will use: Course outline: We describe learning objectives, assessment and content.



Development

- 1. We implement the designed course structure, content ideas (scenarios). (DESIGN)
- 2. We develop or adapt course resources. We select the content that the learner will use to achieve learning outcomes. (PRODUCTION)
- 3. We integrate teaching and learning resources into course activities. (PRODUCTION)
- 4. We test (EVALUATION). If we want to be sure that the scenario we have developed works, we need to test it. The peer review ensures the smoother performance. During the peer review, we test the structure and functionality of the course.
- *Remember: 1) Topics need to be sequenced. 2) Less is better! Avoid content overload, divide teaching material into parts. Often we try to use as much and as varied content as possible, but <u>we forget the original learning objectives</u>.*



Implementation

Instructions. We make sure that all participants in the course (learners and instructor) know how to use the course content and what the objectives and expected outcomes are.

Preparation of the environment. Learners have to know how to use the learning material, tools, what support they can expect, what the learning objectives and expected outcomes are, and how their achievements will be assessed.

We deliver the course to learners. The role of the instructor as online course moderator is key at this stage.

Remember, the right preparation of the learning environment engages learners in deeper learning.





Evaluation

The purpose of the evaluation is to identify areas for the course improvement, determine if the goals have been achieved.

- Formative assessment is used to promote the individual progress of each learner. The learner is empowered to follow and understand his/her learning progress. Throughout the learning process, information is gathered on what the learner has already learned and where he/she still need help.
- Summative assessment. We usually do it at the end of course.



The creation of the course is an iterative process and the movement from one stage to another is flexible, but strictly circular.

Key features: flexibility and the development of systematic approaches and strategies.

Examples of tools used to implement the course based on the ADDIE model: <u>Trello</u>, learning management systems, such as <u>Moodle</u>, <u>ATutor</u>.

Watch the video that explains the Instructional Design in more detail: https://youtu.be/brhOnv0a4VQ





Course Design

Read the study about the effectiveness of the ADDIE model in the distance education:

Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A Comparative Study of the ADDIE Instructional Design Model in Distance Education. *Information*, *13*(9), 402. <u>http://dx.doi.org/10.3390/info13090402</u>



Examples of good teaching practices. Multimedia

Multimedia presentation includes a combination of texts, graphics, animations, audio, and video. A variety of multimedia engage the learner with different types of learning styles (visual, auditive, kinesthetic).

We focus on the substance of the content rather than the quantity (overloading), teaching goals, consistency, clarity, quality of content, inclusiveness. <u>We create meaningful content elements</u>.

Learn more in this <u>video</u> explaining how to combine design elements to create presentations and <u>article</u> explaining how to design and implement educational videos.

Learn tips in this <u>article</u> explaining how to create effective and engaging eLearning videos.

Further reading: Martin, F. & Betrus, A. K. (2019) <u>Digital Media for Learning</u>. Theories, Processes, and Solution.



Examples of good teaching practices. Multimedia

"...the purpose of media elements should be to deliver the content and instructional methods, not to make a program merely look appealing. Visual appeal, therefore, is simply a byproduct of good instructional design. A truly premier eLearning course is one that will look attractive, feel vibrant, encourage participation, and incorporate activities that support the learning objectives and various learning styles of its participants."

(Edelhauser & Lupu-Dima, 2020)



Examples of good teaching practices. Multimedia

Explore the template for creation of the learning video: TU Graz (2021). Learning Video Canvas:

Collection of Ideas for the Learning Video. Graz: TU Graz. Published under CC BY 4.0 International. URL:



Examples of good teaching practices. Feedback

Feedback from the instructor or colleagues helps to achieve and improve learning outcomes, provides more critical insights, and promotes reflection and self-regulation. The good feedback system involves learners in the learning process, encourage and motivate them.

Feedback must be constructive, educative, clear, valuable, consistent and <u>continuous</u>, synchronous or/and asynchronous.

Read more about the feedback expierence: <u>Improving teaching and learning experience through giving</u> <u>feedback for teachers during the semester: Vilnius University case</u>

Read strategies for providing feedback in online courses

Learn more about the importance of feedback in this video.





Examples of good teaching practice. Activities for active learning

We design activities that encourage learners to apply knowledge they have learned in the course material. Different activities make the passive learner become the active learner. We aim to promote active learning through strategies such as: game-based learning, enquiry-based learning, technology-enhanced learning, project-based learning. In addition, we have to support the traditional social engagement, so we need to use activities that contribute to the social and behavioural development of the learner such as group studies, co-learning. When we design learning activities, we remember that active learning is precisely described by this proverb: "What I hear, I forget. What I see, I remember. What I do, I understand." (Xunzi, 340 - 245 BC)

Learn more: Sukackė, V., Guerra, A. O. P. de C., Ellinger, D., Carlos, V., Petronienė, S., Gaižiūnienė, L., Blanch, S., et al. (2022). Towards Active Evidence-Based Learning in Engineering Education: A Systematic Literature Review of PBL, PjBL, and CBL. *Sustainability*, 14(21), 13955.

http://dx.doi.org/10.3390/su142113955



Examples of good teaching practices. Activities for active learning

The combination of **asynchronous and synchronous learning** activities is recommended. For example, pair work, collaborative tasks, feedback are more effective then conducted synchronously.

The **combination of learning strategies** increase the learner motivation:

- Examples of **individual learning** activities: minute paper/reflections, case study.
- Examples of **collaborative learning** activities: team paper, team project, debates, peer review, case study, think-pair-share/write-pair-share, games, etc.

Further reading: <u>Centre for Higher Education Research, Policy and Practice (</u>2019). Active learning strategies for higher education. CHERPP, p.1-175p. ISBN:1900454661





Examples of good teaching practices. Activities for active learning

Augmented Reality. An interactive, direct or indirect representation of the real world with computergenerated content by using additional virtual information.

Virtual Reality. An artificial environment created by computer hardware and software that is rendered for humans to feel as if they are in the real environment.

Further reading:

Gudoniene, D., Blazauskas, T., Staneviciene, E., Motiejunas, L. (2022) CASE STUDY ON THE EFFECTIVENESS OF THE MENTAL AND PHYSICAL ACTIVITIES IN VIRTUAL AND AUGMENTED REALITY, EDULEARN22 Proceedings, pp. 296-305.



Effective eLearning

Read the article about effective learning strategies:

Khazanchi, D. et al. (2022). Strategies and best practices for effective eLearning: lessons from theory and experience in *Journal of Information Technology Case and Application Research, 24(3)* <u>https://doi.org/10.1080/15228053.2022.2118992</u>



Lessons learned...

Watch this video about lessons learned from online teaching (still relevant today):

https://youtu.be/Bp4BG4Me7TU

Watch this video about engaging learners by design.





Reflections...

We often think that the benefits of eLearning are not as significant as face-to-face learning.

But it all depends on how effectively we plan and deliver the content and moderate learning in the learning environment.

Watch <u>this video</u> about the content presentation to an audience. This video is not about eLearning, but what do you notice? (*Write down your thoughts on teaching and learning (what is important?) in your notes*)





Virtual learning environment

The virtual learning environment (VLE) enables us to apply and use various learning scenarios. Each VLE is designed to improve learning and the quality of learning, but differs from each other in VLE functions. Almost VLE is centrally maintained by universities and has all resources that compliant with pedagogical theories and practices. Communication, productivity, learner involment, course administration, course delivery, curriculum design tools are provided in VLEs. Most VLEs have **reporting and analytical tools** that enable instructor to track the learner progress and assess areas where support is required.

The most popular VLEs: <u>Moodle</u>, <u>Blackboard</u>, <u>Canvas</u>, <u>D2L</u>.

The most important aspect of VLE: <u>social constructionist pedagogy</u>. For example, *Moodle* delivers the set of learner-centric tools and collaborative learning environments.

Learn more tips in this <u>article</u> explaining how to create the successful VLE.



Videoconferences

Videoconferences can substitute the physical interaction with the course participants. We use videoconferences for teaching, meetings, tests, examinations, conferences, seminars, etc.

The most popular tool, <u>Zoom</u>, is used for the organisation of video and audio conferencing, collaboration and communication. The main <u>Zoom</u> features are the following: group video conferences, one-to-one meetings, screen sharing, recordings.

Other tools: <u>Microsoft Teams</u>, <u>Skype</u>, <u>Google Chat</u>, <u>Google Meet</u>.

Analyse guidelines for the development of videoconferences (p. 95-102):

Ubachs, George, Meuleman, Stefan, & Antonaci, Alessandra. (2022, November 17). Digital Reset: European Universities Transforming for a Changing World. Proceedings of the Innovating Higher Education Conference 2022 (I-HE2022). Zenodo. doi:10.5281/zenodo.7330857



Communication platform

Communication platforms, such as <u>Microsoft Teams</u> (MS Teams), support ideas of social constructivist theory and computer-supported collaborative learning process. Platforms help the group of people to efficiently organise their eLearning, remotely work and communication in one place, contain tools for communication, collecting and updating documents, provide the possibility to exchange information, track and coordinate the progress of the entire work.

In comparison with other collaboration and communication platforms, such as <u>Zoom</u>, <u>MS teams</u> is preferred due to its functionality.

Read the article about the effective online communication:

https://pressbooks.pub/humanmooc/chapter/lets-talk-effectively-communicating-with-your-online-students/



Tools for the interactive content

In eLearning, we use tools to create the high-quality learning content, videos lectures, quizzes, tests, assignments, etc. We aim to promote learners' interest and creativity. When we choose the tool, we need to know: what content we will create, its purpose, who will create it, and how much time we can invest in creating it. We can use web (for example, H5P, Canva) or desktop applications (for example, Articulate 360, Lumi). Of course, we can use tools that are integrated in our VLE. Examples of interactive content are as follows: surveys, polls, personalized quizzes and assessments, interactive infographics, eBooks, reports.

Compare the learning content created with *Articulate 360* and *H5P*.

Example of the interactive eLearning content with Articulate 360

Examples of the interactive content with H5P





Design Tools

There is a strong focus on tools with gamification and interactive content elements. The following are examples of popular Design Tools:

- The learning platform *Kahoot!* (https://kahoot.com/) makes learning awesome. It is used to create active participation by combining a fun and social way. *Kahoot!* is used in 87 % of top universities around the world. We are able to create learning games, quizzes, questionarries and get feedback, track learning progress, collaborate with others educators and content creators. *Kahoot!* is available in paid and open versions.
- *Mentimeter* (https://www.mentimeter.com/) is a platform used to create more effective and dynamic presentations, run surveys. Templates and examples of presentations, quizzes, icebreakers, polls, surveys, games, word cloud are available.
- <u>Moodle</u>



Unit 3: MOOC and OER

MOOC

- M Massive course is provided for unlimited number of learners
- O Open course is free of charge
- O Online course is provided trought the internet
- C Course learning content

Learn tips in this article explaining how to integrate MOOC into our teaching:

Peter G. M. de Jong, James D. Pickering, Renée A. Hendriks, Bronwen J. Swinnerton, Fereshte Goshtasbpour & Marlies E. J. Reinders (2020) Twelve tips for integrating massive open online course content into classroom teaching, Medical Teacher, 42:4, 393-397, DOI: 10.1080/0142159X.2019.1571569

Why should Higher Education Institutions implement MOOCs? Read more about <u>Lithuanian Higher</u> <u>Education Institutions' experiences with MOOCs</u>.



Unit 3: MOOC and OER

OER

Open Educational Resources (OER) are teaching, learning, and research materials that reside in the public domain or have been released under an open license that permits their free use and re-purposing by others.



Watch this video about OER:



Unit 3: MOOC and OER

OER

Learn more tips in this <u>video</u> explaining how to create Open Education Resources.

 Further reading: Blaschke, L. M. (2016) Open Educational Resources (OER): Guidance for Institutional

 Decision Makers in Developing an OER Strategy.





Did you know that 63% of examples of good practices involve teaching and learning and assessment and evaluation? (According to the VLE teaching/learning and assessment methods analysis report).

We can find numerous recent sources, research reports, guidelines and project results on how to teach in higher education and how to assess learners



Source:

https://www.kaunokolegija.lt/kk_wp_content/uploads/sites/5/2022/0 3/Report-IO1.pdf



Example of Project (1)

The project "Online training: the treasure within" (Erasmus+ project, duration: 2018 – 2020) developed an educational material aimed at instructors, in addition to online educational tools that are useful to promote social learning. The main results of the project are as follows: 1) the guide for the online instructor, which includes techno-pedagogical content for an adequate teaching through online platforms, 2) online learning course and activities, with social, collaborative and discovery activities.

More about the project: https://ontrain.eu/2020/04/28/educational-material-learning-units/





Example of Project (2)

ILDE 2 is a community platform for learning design. It aims to support the complete learning design lifecycle: from authoring the designs to deploying them in VLEs for evaluation and eventual redesign, all in the context of instructors communities.

Watch this video introducing the project: https://youtu.be/2l_5W5NoXh4





Rubric

Explore the example of a rubric <u>QUALITY ONLINE COURSE INITIATIVE (QOCI) RUBRIC</u>. This rubric aims to help faculty develop quality online course, provides best practice. The rubric includes Instructional Design, communication, interaction and collaboration, learner evaluation, learner support and resources, instructional material and technologies, accessibility, and course evaluation.





Documents that influence the eLearning

International

- **Digital Education Action Plan**
- **Digital Competence Framework for Educators**
- EU general data protection regulation (GDPR)
- National/Institutional



Law on Higher Education and Research, Institutional Evaluation, Study regulations of University, Strategic Action Plan

Code of Ethics, Internal Evaluation Policy, Student Contracts



Let's think...

Remember this video (watch it again)

Think about what we should apply from this video to eLearning. Compare previous notes.





Summary

Key takeaways

- Use the ADDIE model to construct the consistent and effective online course.
- Plan and develop the content by choosing tools that promote learner to explore, discover, interpret, and collaborate. Plan course that promote **active learning**.
- Bring good face-to-face teaching practice to the online environment by choosing digital tools we have and know how to use it.



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Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online Teaching and Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. *Sustainability*, 12(24), 10367. http://dx.doi.org/10.3390/su122410367

Dagiene, V., Jasute, E., Navickiene, V., Butkiene, R., & Gudoniene, D. (2022). Opportunities, Quality Factors, and Required Changes during the Pandemic Based on Higher Education Leaders' Perspective. *Sustainability*, 14(3), 1933. MDPI AG. Retrieved from <u>http://dx.doi.org/10.3390/su14031933</u>

Edelhauser, E., & Lupu-Dima, L. (2020). Is Romania Prepared for eLearning during the COVID-19 Pandemic? *Sustainability*, 12(13), 5438. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su12135438



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OECD/EC: Supporting Entrepreneurship and Innovation in Higher Education in Lithuania (2021). https://heinnovate.eu/sites/default/files/shared_file/Final%20HEInnovate-Lithuania_12.11.21.pdf

Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A Comparative Study of the ADDIE Instructional Design Model in Distance Education. *Information*, 13(9), 402. http://dx.doi.org/10.3390/info13090402

Veluvali, P., & Surisetti, J. (2022). Learning Management System for Greater Learner Engagement in Higher Education— A Review. Higher Education for the Future, 9(1), 107–121. <u>https://doi.org/10.1177/23476311211049855</u>



Question 1: In which stage of the ADDIE model do we create the course outline?

- DESIGN
- DEVELOPMENT
- ANALYSIS

Feedback: At the end of the Design stage we have the course outline. During the ANALYSIS, we identify the needs of the learners, required methods and technologies. Development involves the production and testing of the methodology being used.



Question 2: Is the following statement correct: The multimedia delivery of everyday experiences and real-world examples is used to provide authentic learning material.

- No
- Yes
- Media presentations are not recommended for the eLearning

Feedback: The purpose of media elements deliver the content and instructional methods. By presenting our experiences through the multimedia, we encourage learners to engage with course material. Learners interact with media content and use the required tools for the reflection and presentation of learning experience.



Question 3: Which of the following strategies is not suitable for providing feedback in the eLearning course?

- Comment on every student posting.
- Integrate theory with observations and applications.
- Provide consistent and continuous feedback.

Feedback: By providing consistent and continuous feedback, we need to encourage each learner to think, to discuss and find solutions together, and to share their experiences.



Question 4: Which of the following active learning strategies encourage learners to share their ideas with others?

- Minute paper, case study
- Think-Pair-Share, individual work
- Team paper, videos

Feedback: Videos are the presentation of content. Interactive videos, for example with interactive questions, are used to promote individual learning. Minute paper is used to promote learner or group of learners reflection on their learning. The instructor presents question(s) and the learners have a few minutes to answer. In the case study, learners analyze the problem and discuss the solution. In Think-Pair-Share activity, learners solve the particular challenge, compare solutions with other groups and present.



Question 5: Which of the following strategies is not suitable for effective eLearning?

- Promote learner reflection
- Pedagogy supports technology
- Fit eLearning methods, learning objectives and learner styles

Feedback: The use of appropriate tools, personalisation, and accessibility are key to promoting learner engagement. We choose tools according to the pedagogical approaches we use. Teaching methods must be appropriate to the learning objectives and fit different learning styles.



Question 6: When we plan to integrate MOOC content, a good practice is to:

- Define what content we will include in our course
- Design MOOC content according to the passive learners
- Ensure the MOOC content is not available to all learners
- Make sure training objectives, content and assessment are not aligned.

Feedback: We should always define the learning objectives and content before the course is delivered. We encourage active learning through activities. Throughout the course, we need to ensure that learners achieve the objectives set at the beginning of the course, are able to self-assess and are assessed so that they can improve their experience.



Additional Resources

- European Distance and E-Learning Network <u>https://www.eden-online.org/</u>
- Lithuanian Association of Distance and e-Learning <u>https://liedm.net/en/about-liedm/</u>
- OER Commons is a public digital library of open educational resources <u>https://www.oercommons.org/</u>
- Free online courses on various topics <u>https://imoox.at/mooc/</u>
- MOOC Challenge Based Learning in Higher Education https://imoox.at/course/cblmooc