DigiTel Pro

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DigiTeL Pro

Professional development in digital teaching and learning

A compendium of selected best practice training materials and/or resources for CPD for online and distance learning

I04-A2 Report
UOC-OUNL-UNINETTUNO

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Table of Contents

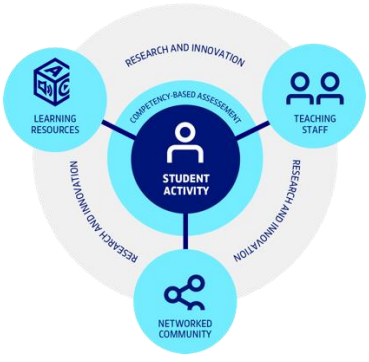
OUNL model

The Open University was founded in September 1984 – Queen Beatrix conducted the official opening – when the first students enrolled. However, the university has a prior history dating back to the beginning of the seventies. The term 'lifelong learning' was already used by Minister Marga Klompé during the government of 1967-1971, as a 'contribution to the formation of conscious and responsible people'.
As a publicly funded university, the Open Universiteit has been assigned a unique role within the higher education system of the Netherlands. The Open Universiteit has received a dedicated legal task to contribute to the innovation of Dutch higher education and has become the expert in teaching and learning in technology supported environments inspired by the latest on research in education sciences, pedagogies and educational technology.
OUNL university is the leading part-time university in the Netherlands and Flanders (Belgium), offering high-quality, personalised and interactive online education, reinforced with socially relevant research, and contributing to the innovation of (Dutch) higher education. The administration is based in Heerlen, but the university has twelve study centres and three support centres dispersed throughout the continental Netherlands, as well as six study centres in Dutch-speaking Flanders (Belgium) and partnerships with institutions in Aruba, Bonaire, Curaçao, Sint Maarten and Suriname.
The Open Universiteit provides accessible, inclusive and flexible education for adults. From the start in 1984, the Open Universiteit has been a distance teaching university and has always been renowned for the quality of our education. The Open Universiteit develop pedagogies and didactical scenarios to fit distance education and has created its own learning material. Although our university started with paper-based learning material combined with guided self-study that we shipped to our students, the Open Universiteit very quickly started using multimedia ranging from television broadcast, audio- and video types to modern forms of multimedia, serious games, mobile apps and online applications. Already in the early nineties OUNL developed an online learning environment to deliver its courses, always combined with synchronous and asynchronous communication and collaboration and a mix of multimedia.
Openness is ingrained within its DNA; it stands for the continuous study, improvement and development of new teaching methods and techniques, along with sharing knowledge and experience. The Open Universiteit offers flexible and personalised academic education. There are no entry requirements for our bachelor courses, making academic education available to all, and those who do not have the formal academic qualifications to register in traditional universities. Admission to our master programmes is possible after a completed bachelor programme in a related domain or through a premaster. Prospective students can make use of self-assessment and student services to determine if this kind of study suits them.
Although our bachelor and master programme constitute the basis of our education students can enroll in individual courses, take a Certified professional programme, or make use of the dedicated services and programmes for teachers or healthcare professionals. Instead of a enrolling in the full bachelor programme, students can enroll in individual courses. Students can choose their own pace in which to take courses, can temporarily reduce pace or take a break from the study, be it individual courses, bachelor or master programmes. Because all our courses are offered online, students can choose when and where to study. In its teaching and research, the Open Universiteit makes intensive use of the possibilities afforded by the internet. Personalised and interactive online education lies at the core of its educational model.
Our current educational model is one of activating online education. All our courses are made available through our dedicated online learning environment that combines several relevant tools and applications such as a virtual class, game environments, apps, assessment tool, etc.

Our educational model includes the following principles. All courses are offered online. Courses are designed in an uniform manner to ensure students know what is expected and are not distracted from learning. Courses are designed based on the state of the art in educational science and educational technologies. Courses are designed along constructive alignment principles, aligning assessment with learning objectives, include learning activities, and active pedagogies and didactics, following constructivist and connectivism approaches. Students have 12 months to complete a course. The majority of courses has a fixed starting time in one or two of our four 10-week terms. Teaching and tutoring is offered in these fixed terms, and concluded by one week examination. Other courses do not have a fixed starting time and students can enroll and start at any time. Courses provide formative assessment and students receive detailed feedback. Teachers are clearly present in the course and the course has a certain number of synchronous events, online or in one of our study centres in the Netherlands and Belgium. Students are stimulated to interact and collaborate. Every course concludes with a summative assessment, that can combine several forms, ranging from paper or online exams based on multiple choice and open questions, essays, assignments, oral exams.

UOC model

The UOC was created in Barcelona in 1994 and teaching began in 1995, with 200 students. The University continually uses cutting-edge e-learning research and innovation to refine the UOC methodology. This is possible thanks to UOC R&I and its 50 plus research groups, as well as the eLearning Innovation Center, which drives educational innovation at the UOC. The eLearning Innovation Center is the UOC's centre for innovation and learning transformation and works to evolve the educational model, attempting to integrate the latest educational and technological trends, but without altering the essence.
The UOC's unique approach to learning is based on completing activities, and continual guidance and support. Teaching takes place in online classrooms and involves competency-based assessment. For the UOC community, the Virtual Campus is where it all happens. The Campus has virtual classrooms where students can find their course instructors, tutor and fellow students, as well as their activities, materials and tools for learning. The courses are mainly asynchronous. With more than 85,700 graduates, it is now one of the biggest universities in Spain. During the pandemic UOC helps more than 9,000 teachers adapt to remote teaching during the pandemic



UNINETTUNO model

The psycho-pedagogical and didactic model of UNINETTUNO was born from the results of 25 years of international research and was realized by the Rector, Prof. M. A. Garito and her research group. The student of International Telematic University UNINETTUNO is at the center of the educational process, guided by a new figure of teacher-tutor, who has the task of providing the right tools to facilitate the process of learning and communication on the network. The main didactic tool of UNINETTUNO is the learning environment on the Internet, where teaching and learning are carried out in 6 languages - Italian, English, French, Arabic, Greek, Polish - and allow the implementation of a psycho-pedagogic model characterized by the passage:

- from the centrality of the teacher to the centrality of the student;
- from the transmission of knowledge to the construction of knowledge
- from the integration of theory and practice;
- from passive and competitive learning to active and collaborative learning.

The psycho-pedagogical model provides maximum flexibility in favor of the student. With this model, the student can construct his or her own learning path according to his or her training needs and level of competence. The learning environment developed in this way is not limited to offering rigidly defined static courses, but offers dynamic content that can be enriched by other content that exists on the network. The continuous research activities, analyses and testing conducted by the working staff, coordinated by Prof. M. A. Garito, allowed to define and elaborate communication models to be applied in the making of videolessons and multimedia teaching materials linked to them. The outcomes of this research activity, the study and the deepening of the theories related to communication, learning, and memory allowed to identify useful models to explain a lesson to virtual students, languages and styles to be adopted by a video-teacher with the aim to trigger a critical and reflective learning process. Video technologies lead academic teachers to cope with and face a new language for transmitting knowledge that certainly does not belong to their normal teaching method. The teachers have to learn a new mode for explaining, synthesizing, laying out the subjects, linking images and words, taking into account body language, posture and clothing. In designing the videolessons UNINETTUNO has taken into account the existing theories on unidirectional communication, as well as on the language of the image, and in particular:

• on written communication (Horowitz and Samuels, 1987)
• on the characteristics of the technological means
• on aspects of reasoning and representation of information (Johnson-Laird, 1983)
• on the role of memory, functioning of the mind, understanding and learning (Bower and Cirillo, 1985; Norman, 1988; Gagné and Briggs, 1974; Ausuble, 1978; Vygotskij, 1978).

As a consequence of this theoretical approach, to realize an effective learning process with videolessons, we consider what are the main stages with which the human mind develops and builds critical knowledge. The teaching process has been decomposed into different phases, each with different construction needs: phase of motivation, understanding, acquisition and retention, phase of memory, generalization, performance, feedback.

Compendium of best practices

The following best practices, selected by OUNL, UOC, and UNINETTUNO, can help to spread online education. Even though the majority have been realized in the own language of each country, they can be translated as well as adapted to different realities. The target of the good practices are mainly teachers and students from high education, but also secondary school and social entities, and in some cases anybody involved in education and interested in online education and latest developments. Websites, webinars, minimodules, toolkits, video rubrics, platforms, and innovative tools are presented below.

OUNL best practices

1

Title: Digitale didactiek [Digital didactics]

Training material or resource? This is a combination of all kind of resources and training materials.

Explain the training material/resource. The Open Universiteit developed a website with guidelines, webinars, blogs, online lectures, courses, tips and recommendations for development, implementation, teaching and tutoring online education.

Target group and stakeholders involved: Anybody involved in the transition to online education, not necessarily limited to higher education.

Evidence-based: The information provided is based on the experience and expertise of the Open Universiteit on online education. Our education is always inspired by our research and reflects the state-of-the art in educational sciences and educational technology. See website https://youlearn.ou.nl/web/hulp-bij-online-onderwijs

What are the characteristics that makes this a good practice? The website is based on our expertise and reflects state-of-the art. The combination of static resources to be perused with dynamic synchronous and asynchronous events enriched the experience. All resources, webinars and courses are available for free.

Benefits and challenges: As a freely available source it is available to the public and anybody who is interested or involved in education. It remains relevant in any situation, and is not restricted to emergency move to online education.

What was the context? Most of the resources are aimed at anybody involved in the move to online education. The courses are intended for those who actually need to make the change and implement it in their courses, not limited to higher education. Limitation: the website, resources and courses have been developed by the Open Universiteit and are available in Dutch only.
When was it designed (before, at start, during, after covid)? In the first few weeks of the pandemic, but regularly updated.

Usability: Due to the mix of resources, anybody can pick what they need.

Skills and competences required: To design the website it depends on the type of resource: being able to enter text in an online webpage to being able to design, deliver and tutor webinars and online courses.

Tools, Means and Media: Website, virtual classroom or similar application to provide webinars, online learning environment for courses, weblog

Examples of implementation: See website https://youlearn.ou.nl/web/hulp-bij-online-onderwijs

Additional information (optional): Being aimed at Dutch education, the website is in Dutch only.

2

Title: DDGuide: Digitale didactiek: zo maak je online onderwijs. Professionalisering in online onderwijs [Digital didactics: the way to design online education. Professionalization in online education]

Training material or resource? Training material

Explain the training material/resource: Webinars and courses for those teachers who want to or need to adjust their education to an online environment. Participants of the webinars are invited to enrol in the courses when they want to professionalise and adapt their own practice.
Topics for the webinars include online activating and tutoring of pupils and students, collaboration, assessments, feedback, systematically developing good online education, how to implement an online learning environment, designing and developing learning material.
Online courses are 1EC courses at university bachelor level. Courses are designed to be hands-on. Teachers can immediately put what is learned into practice in their own education.
Every online course lasts three weeks and start with an online webinar. Participants read literature. Next, in two online sessions they discuss their own educational context with teachers and peers. Participants then redesign a course or learning opportunity and submit the redesign as final summative assignment. A certificate can be issued when all formative assignments have been submitted and the summative assignment has been assessed as satisfactorily.
Online courses:

- Designing online education
- Online assessment
- Didactics of online education
- Online collaborative learning
- Multimedia in online education
- Online formative assessment

Target group and stakeholders involved: The webinars and online courses are intended to support teachers who have to move their education online.

Evidence-based: All our education is informed by state-of-the-art on educational theories, educational sciences and research, https://www.ou.nl/web/ddguide/ddguide

What are the characteristics that makes this a good practice? Easily accessible webinars and follow up courses. Linked to teachers' practices. Designed to assist and support immediate changes of educational practices.

Benefits and challenges: The free webinars are available to anybody who is interested in the topic. Recordings of the webinars are made publicly available. Those who need more detailed information can sign up to 1EC online courses of their choice.

What was the context? The Open Universiteit started making resources and webinars available to Dutch educational institutes from the start of the Covid pandemic. Webinars were added during period. Online courses were developed and made available already March 2020.

When was it designed (before, at start, during, after covid)? At start and during covid.
Usability: Webinars and recordings of webinars are available to anybody with an internet connection. The courses are aimed at educational professionals and targeted at their level.

Skills and competences required: Teachers need teaching and pedagogical competences and some instructional design when designing their own course or course material.

Tools, Means and Media: Website, virtual classroom or similar application to provide webinars. For online courses: online learning environment with communication, interaction and collaboration facilities, virtual classroom or similar application to provide webinars

Examples of implementation: In support for Dutch (higher) education during the onset of Covid.

Additional information (optional):

3

Title: Micromodules Activerend online onderwijs [Micromodule Activating online education]

Training material or resource? Training materials

Explain the training material/resource: The Open Universiteit developed a series of minimodules to inform anybody interested about the state-of-the-art in online education.

Micromodules have a study load of 2 - 4 hours. Topics are

- What is online education?
- Activating in online education

- The virtual classroom
- Virtual reality in online education
- Assessment in online education
- Research on online education

Target group and stakeholders involved: Anybody involved in education and interested in online education and latest developments, not necessarily limited to higher education.

Evidence-based: The information provided is based on the experience and expertise of the Open Universiteit on online education. Our education is always inspired by our research and reflects the state-of-the art in educational sciences and educational technology. This is the link to the modules https://www.ou.nl/en/-/micromodules-activerend-online-onderwijs

What are the characteristics that makes this a good practice? Minimodules are available for free and inform about the latest developments in online education that can be easily implemented also in other delivery modes. Minimodules being delivered online allows participants to experience and enjoy online learning. Provided in guided sessions or available as self-study.

Benefits and challenges: As a freely available source it is available to the public and anybody who is interested or involved in education.

What was the context? The minimodules are aimed at anybody interested in the state-of-the-art in education. The minimodules have been developed by the Open Universiteit and are available in Dutch only.

When was it designed (before, at start, during, after covid)? Before covid

Usability: Easy to use online resources, available as self-study when guided sessions are not provided.

Skills and competences required: No particular skills and competences are needed

Tools, Means and Media: Website, virtual classroom or similar application to provide webinars, online learning environment to provide resources and support interaction, communication and collaboration.

Examples of implementation: /

Additional information (optional):

4

Title: Pe(e)rfect Vaardig: Rolmodellen en peer feedback [Pe(e)rfect Competent: Rolemodels and peer feedback]

Training material or resource? Educational approach to teach and learn competences

Explain the training material/resource. The Open Universiteit developed an additional approach to teach competences with the support of video rubrics. First pilot took place at secondary school level. The approach is continuously improved and now being adapted to university students. To learn practical skills, students need to practice, practice and practice some more. In addition, they need support, constructive feedback and structure. Lecturers often do not have the time to regularly give personal feedback to the increasing groups of students. The Open Universiteit is therefore developing Pe(e)rfect Vaardig. An online approach with which students learn to practice skills independently and give each other structured feedback.The Pe(e)rfect Vaardig approach works as follows: students watch video images of role models and recordings of themselves and others. Then they assess their own skills and give each other feedback through video-enriched rubrics. They then view clear visualizations with summarized feedback. They quickly see what is going well and what could be improved, so that they can practice in a more focused way. They can also set new learning objectives for the next practice round. The students can practice where, how often and when it suits them. Until they are satisfied and want to share their presentation for feedback. The tool makes them more independent and at the same time aims to relieve teachers of the burden.

Target group and stakeholders involved: University bachelor students Law and Psychology practicing complex competences such as oral presentation.

Evidence-based: The method was formulated based on theoretical evidence of formative assessment, rubrics, instructional design and multimedia theory. The methodology was developed and tested in several projects and educational situations and was the topic of a PhD candidate.

Ackermans, K. (2019). *Designing Video-Enhanced Rubrics to Master Complex Skills.* [Doctoral dissertation, Open Universiteit]. Open Universiteit research portal. https://research.ou.nl/en/publications/designing-video-enhanced-rubrics-to-master-complex-skills

Ackermans, K., Rusman, E., Nadolski, R. J., Brand - Gruwel, S., & Specht, M. M. (2021). Feedback is a gift: Do Video-enhanced rubrics result in providing better peer feedback than textual rubrics? *Practical Assessment, Research & Evaluation, 26*(1), Article 17. https://doi.org/10.7275/hk9e-8d82

Ackermans, K., Rusman, E., Nadolski, R. J., Specht, M. M., & Brand - Gruwel, S. (2021). Video-enhanced or textual rubrics: Does the Viewbrics' formative assessment methodology support the mastery of complex (21st century) skills? *Journal of Computer Assisted Learning, 37*(3), 810-824. https://doi.org/10.1111/jcal.12525

What are the characteristics that makes this a good practice? Extensive guidance, role models, peer feedback, visualisation of achievement and feedback allows students to practice and improve complex skills.

What was the context? The approach is initially designed and evaluated at secondary school level and now implemented in various modules of university bachelor degrees in law and psychology. The approach is developed and implemented by the Open Universiteit. Currently also Maastricht University is involved.

When was it designed (before, at start, during, after covid)? Teaching and learning complex skills is not directly related to covid but applicable in all educational levels and delivery modes.

Tools, Means and Media: To design the rubric an assessment expert might be needed. To record the video examples, an instructional designer, multimedia expert might be needed, as well as a good quality video recording tool or software.

Examples of implementation: /

Additional information (optional): This is the link to the webpage https://www.ou.nl/en/-/leren-en-innoveren-met-ict-projecten-pe-e-rfect-vaardig-rolmodellen-en-peer-feedback

UOC best practices

1

Title: Emergency remote teaching

Training material or resource? Training and Resources

Explain the training material/resource. 24 online webinars to help the teaching community end the school year online. COVID-19 forced educational centres around the world to close halfway through the year, yet academic activities had to go on. Teachers from every continent were obliged to forge ahead with their teaching remotely, despite having neither the tools nor the knowledge to do so in most cases. Faced with this exceptional situation, the UOC decided to lend a helping hand by sharing its teaching staff's knowledge and its 25 years' experience in e-learning. More than 80 members of the UOC's staff took part in the initiative, with the complicity, commitment and hard work of all of the UOC's faculties and 13 management departments.

Target group and stakeholders involved: Professors high education and secondary education

Evidence-based: Link to the webinars https://www.uoc.edu/portal/es/coronavirus/docencia-emergencia/lista-webinars.html

Methodology used to collect information on this practice: The information is published on the UOC website.

What are the characteristics that makes this a good practice? More than 34,000 viewers from more than 70 countries followed the lectures live and about 10,000 signed up for the series' webinar. Half of the participants came from Spain, followed by countries on the other side of the Atlantic, such as Colombia, Ecuador, Mexico, Peru, Argentina, Chile and Venezuela. Moreover, 40% were university teachers and 20% worked in secondary education.

Benefits and challenges: facilitate the transition from face-to-face to remote teaching for Spanish-speaking teachers participating in the training series, regardless of the educational system existing in their country, in the shortest possible time, quickly and interactively". Webinars are available free of charge to university, secondary education and vocational training teachers.

What was the context? UOC high education context during pandemic

When was it designed (before, at start, during, after covid)? During the pandemic

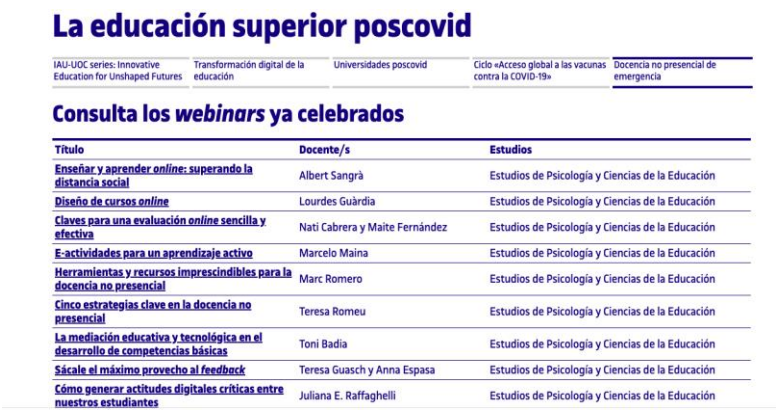
Usability: Webinars are available with an Internet connection in the UOC channel of Youtube

Skills and competences required: Webinars are mostly in Spanish so knowledge of this language is needed

Tools, Means and Media: Webinars

Examples of implementation: there are no insights in the actual transfer into teaching practice, but we know that there are 34000 viewers from the beginning of pandemic

Additional information (optional): /



La educación superior poscovid

IAU-UOC series: Innovative Education for Unshaped Futures | Transformación digital de la educación | Universidades poscovid | Ciclo «Acceso global a las vacunas contra la COVID-19» | Docencia no presencial de emergencia

Consulta los *webinars* ya celebrados

Título	Docente/s	Estudios
Enseñar y aprender *online*: superando la distancia social	Albert Sangrà	Estudios de Psicología y Ciencias de la Educación
Diseño de cursos *online*	Lourdes Guàrdia	Estudios de Psicología y Ciencias de la Educación
Claves para una evaluación *online* sencilla y efectiva	Nati Cabrera y Maite Fernández	Estudios de Psicología y Ciencias de la Educación
E-actividades para un aprendizaje activo	Marcelo Maina	Estudios de Psicología y Ciencias de la Educación
Herramientas y recursos imprescindibles para la docencia no presencial	Marc Romero	Estudios de Psicología y Ciencias de la Educación
Cinco estrategias clave en la docencia no presencial	Teresa Romeu	Estudios de Psicología y Ciencias de la Educación
La mediación educativa y tecnológica en el desarrollo de competencias básicas	Toni Badia	Estudios de Psicología y Ciencias de la Educación
Sácale el máximo provecho al *feedback*	Teresa Guasch y Anna Espasa	Estudios de Psicología y Ciencias de la Educación
Cómo generar actitudes digitales críticas entre nuestros estudiantes	Juliana E. Raffaghelli	Estudios de Psicología y Ciencias de la Educación

2

Title: Toolkit UOC para la transformación digital de entidades sociales (Toolkit UOC for the digital transformation of social entities)

Training material or resource? Resources

Explain the training material/resource. 16 topics are developed in this toolkit. Good practices and work tools and templates are provided. The toolkit is divided into guides and worksheets. Guides are more extensive and are designed for complex processes such as change management and virtual dynamization. In this sense the target are social entities, but several topics and tools can be relevant for higher education, as the focus is on virtual dynamization (how to virtualize face-to-face course, how to dynamize online activities, how to communicate online). Part of the Worksheets are shorter, with guidelines for virtualizing activities and workshops, for evaluating a tool, or aspects to consider in terms of security, among others. Good practices, with some inspiring examples, are also presents.

Target group and stakeholders involved: Social entities (foundations, organizations, etc.), transversally could also be useful for higher education institutions who are moving to online learning

Evidence-based: Link to the Toolkit http://toolkit-entitats-socials.recursos.uoc.edu/es/

Methodology used to collect information on this practice: The information is published on the UOC website
What are the characteristics that makes this a good practice? Initially, several interviews were conducted with the entities to gather their main concerns and needs. From here, the responsible of the toolkit (Susanna Tesconi and Gemma Abellán) made an analysis of the results and create the content. The Toolkit is conceived as an open initiative that aims to be a place for co-creation and continuous improvement and that wants to enable exchange and feedback between entities and the UOC.

Benefits and challenges: It is a living, useful, adaptable and updatable tool which is available in open access. A limitation is the language, as it has been written in Spanish.

What was the context? UOC high education context during pandemic

When was it designed (before, at start, during, after covid)? During pandemic

Usability: The toolkit is available with an Internet connection in the UOC website

Skills and competences required: The toolkit is in Spanish, knowledge of this language is needed

Tools, Means and Media: Webpages

Examples of implementation: /

Additional information (optional):

3

Title: Conectad@s: la universidad en casa [Connected: university at home]

Training material or resource? Resource

Explain the training material/resource: Platform to support the transition from face-to-face teaching to online teaching, providing useful content: didactic modules, methodologically oriented content, technological platforms and software, as well as psychological advices. The web portal is a project of the Spanish Ministry of Universities and the CRUE (Conference of Rectors of Spanish Universities). It has been designed by UOC and UNED.

Target group and stakeholders involved: Professors

Evidence-based: https://www.uned.es/universidad/inicio/uned_uoc_solidaria.html there is also the link at the UOC website https://www.uoc.edu/portal/es/news/actualitat/2020/172-conectadas-la-universidad-en-casa.html

Methodology used to collect information on this practice: The information is published on the UOC website.

What are the characteristics that makes this a good practice? All the resources published on the platform are free and are focused on both the Spanish university community and educational institutions. The two most important Spanish online universities contributed to the realisation of this platform. The platform is open to users' suggestion contributing to improve the user experience. It tackles several topics: 1) it provides a wide range of guidance and training resources for teachers on e-learning methodology, useful for the design and development of online courses 2) it makes available to researchers, teachers and students a complete repertoire of digital materials and open content in different areas of knowledge 3) it brings together a series of lectures, advice, outreach materials and personalised attention for the psychological care of those who need it.

Benefits and challenges: Make available to researchers, teachers and students a complete repertoire of digital materials and open content from different areas of knowledge. The content is in Spanish.

What was the context? Spanish higher education context

When was it designed (before, at start, during, after covid)? During pandemic

Usability: Available to anybody with an internet connection, there is also the option for blind people

Skills and competences required: No specific skills, except being able to surf on Internet and understand Spanish

Tools, Means and Media: MOOCs, courses, podcasts, radio, videos, television informative programs

Examples of implementation: /

Additional information (optional):

4

Title: Graf

Training material or resource? Resource

Explain the training material/resource: A system that shows students' progress graphically.The system assesses students' progress with their learning and progress with the competencies, and provides them with their own competency graph report. The results are presented graphically for easy inclusion on students' CVs as evidence of the skills acquired during their studies. The teaching staff, for their part, are equipped with a rigorous tool that allows them to assess this progress.

Target group and stakeholders involved: Students and indirectly teachers

Evidence-based: generic information on the UOC webpage https://graf.uoc.edu/

Methodology used to collect information on this practice: The information is published on the UOC website.

What are the characteristics that makes this a good practice? The development of GRAF involved a team of 24 people, including staff from the eLearning Center and the UOC's Academic Services, and directors and support staff from the participating programmes. So far, GRAF has been rolled out in five programmes (three master's degrees, one postgraduate programme and one specialization programme) with a total of 59 courses, 140 members of faculty and 625 students.

Benefits and challenges: GRAF provides instrument that informs the students of the teaching staff's expectations of what they have to learn and helps them to get an idea of what they know and what they can do.

What was the context? UOC context

When was it designed (before, at start, during, after covid)? During pandemic, but it is not strictly related with COVID-19.

Usability: Available to the students enrolled in UOC masters and courses where GRAF has been included as assessment tool.

Skills and competences required: No specific skills, except being able to surf on Internet and understand Spanish.

Tools, Means and Media: Assessment tools.

Examples of implementation: Following masters and graduates courses: Master Executive Direction (UOC-EADA), Master in Design, Visual Identity and Brand Construction, Master in Strategy and Creativity in Advertising, Graduation course on in Assess for learning , ESP course in Direction and Management of Projects.

Additional information (optional): Example of the graphic assessment

5

Title: Artificial Intelligence to Counterweight the Effect of COVID-19

Training material or resource? Resource

Explain the training material/resource: A pilot study of the use of artificial intelligence to detect the needs of students in remote learning has concluded that the data obtained can be used by teachers to offer help to the students who most need it. The research, carried out in conjunction with the UOC, the Eurecat technological centre and the Universidad Autónoma de Madrid will help to solve one of the biggest problems faced by off-site education, which has become more widespread during the pandemic: how to obtain information concerning the progress of students in order to provide them with the necessary support before it is too late.

Target group and stakeholders involved: Students and indirectly teachers

Evidence-based: Subirats, L.; Fort, S.; Atrio, S.; Sacha, G.-M. Artificial Intelligence to Counterweight the Effect of COVID-19 on Learning in a Sustainable Environment. *Appl. Sci.* 2021, *11*, 9923. https://doi.org/10.3390/app11219923

Methodology used to collect information on this practice: The study drew on information gathered from 396 university students between the 2016/2017 and 2020/2021 academic years. Before the final exam, students were given the chance to take tests featuring various questions adapted to their individual level. From their data, students were classified as excellent, on track or at risk.

What are the characteristics that makes this a good practice? Innovation as the practice involves artificial intelligence.

Benefits and challenges: One of the challenges was detecting poor performing students in cases where they crammed at the last minute, because the system was unable to predict this early enough. It is easy to spot students who fall in the excellent category, since those who study in a more ongoing manner obtain better results.

What was the context? The study has been conducted in Spain

When was it designed (before, at start, during, after covid)? Second phase of covid (2022)

Usability: Online education centers

Skills and competences required: No particular skills and competences are needed

Tools, Means and Media: Artificial Intelligence

Examples of implementation: The mentioned pilot study

Additional information (optional): /

UNINETTUNO best practices

1

Title: L'università nel XXI secolo tra tradizione e innovazione [University in the 21st century between tradition and innovation]

Training material or resource? Resource

Explain the training material/resource: This book is not only the culmination of Maria Amata Garito's long scientific research activity, but it also identifies a new way to evolve traditional universities in order to connect them to the real needs of our globalized and interconnected society. Internet with its lights and shadows is the largest public space that the world has ever had, it connects human thought on a global level and this requires a new educational model and therefore also a new model of university.

Target group and stakeholders involved: higher education, supporting individual universities and teachers

Evidence-based: Amato Garito M. (2015). *L'università nel XXI secolo tra tradizione e innovazione*. McGraw-Hill Education. More information at the UNINETTUNO web page https://www.uninettunouniversity.net/it/universita-nel-xxi-secolo-tra-traduzione-e-innovazione.aspx

Methodology used to collect information on this practice: A historical analysis of university models from the Middle Ages to the present shows how the university of the 21st century is at a crossroads between atrophy and renaissance, stagnation and renewal. There is a debate in most parts of the world that the traditional university is no longer able to meet the needs of a new generation of students, the digital natives, who are challenging the traditional university model, whose transformation is no longer a choice but an imperative necessity.

What are the characteristics that makes this a good practice? The report covers the latest trends and developments in new modes of teaching.

Benefits and challenges: The book also shows two new university models, that of the NETTUNO Consortium and that of the International Telematic University UNINETTUNO. Both of them have anticipated the future by creating a technological network supported by a network of people, of intelligences from the North and the South of the world that, without limits of space, time and place, develop knowledge and know-how together to build the future.

What was the context? The context is higher education

When was it designed Before covid

Usability: This resource is easy to use for target group and for other stakeholders involved.

Skills and competences required: No particular skills and competences are required.

Tools, Means and Media: No particular tools, means, and/or media are needed to implement this practice.

Examples of implementation: Higher education, universities

Additional information:

2

Title: How to face the difficult period of COVID-19, managing to guarantee intense academic activity despite the ongoing health emergency

Training material or resource? Resource

Explain the training material/resource. Video (45min). It is an interview to Maria Amata Garito, the Rector of Uninettuno Telematic University, who explains how her university has faced the difficult pandemic period just passed, managing to guarantee intense academic activity despite the ongoing health emergency. The Rector also detailed a series of important points regarding student activity in the coming year, from examination methods to the new frontiers of digital didactics.

Target group and stakeholders involved: Educators and school teachers.

Evidence-based: UNINETTUNO web page https://www.ateneionline.it/news/uninettuno-intervista-al-magnifico-rettore-prof-ssa-maria-amata-garito/

Methodology used to collect information on this practice: Video lesson, webinars

What are the characteristics that makes this a good practice? This material offers suggestions and best practices on how to deal with distance learning mode during the pandemic from the experience of a distance learning portal in five languages (Arabic, English, French, Greek and Italian).

Benefits and challenges: Good practice from a telematic university

What was the context? The context is higher education

When was it designed During covid

Usability: This resource is easy to use for target group and for other stakeholders involved.

Skills and competences required: No particular skills and competences are required.

Tools, Means and Media: Internet connection

Examples of implementation: Higher education, universities

Additional information:

3

Title: Psychotechnologies and Formative Processes

Training material or resource? Training material

Explain the training material/resource MOOC Massive Open Online Courses. The objective of the course is to provide an understanding of how psycho-technologies influence cognitive processes, extend the potential of the mind, and modify patterns of interaction between people of different cultures. The historical transition of technology to psycho-technologies will be analyzed: from a tool of extension of physical functions of the body to a tool of extension of mental functions and therefore of intelligence. The first part of the course aims to offer students the theoretical tools to study and analyze the relationship between communication technologies and cognitive processes; in particular, the course addresses the relationship between technology and psychology. The ways in which media modify the environment and the user are analyzed. The second part of the course focuses on the analysis and study of one of the most relevant disciplines for training in psychotechnology: basic design and web design.

Target group and stakeholders involved: Higher education, supporting individual universities and teachers

Evidence-based:
https://www.uninettunouniversity.net/it/cyberspaziomateria.aspx?lf=it&courseid=4044&degree=209&planid=833&faculty=0

Methodology used to collect information on this practice: The course is complemented by interactive lessons in the Virtual Classroom where the relationships between new information and communication technologies and new models of learning and teaching will be explored, with particular emphasis on socio-constructivist approaches to learning and teaching and on theoretical and practical models of collaborative learning and knowledge co-construction.

What are the characteristics that makes this a good practice? The design process is analyzed according to the perspectives of cognitive sciences, cognitive psychology and information architecture, both by deepening the conceptual paradigms of reference and through practical examples. Particular relevance is given to issues related to communication technologies and languages related to them, in their historical sequence, to models of communication of knowledge and therefore to teaching methodologies and

learning processes: from orality to writing, electricity, analog to digital. It also explores how psycho-technologies, and in particular the Web, have influenced the dynamics of socialization, collaboration and knowledge sharing, and how the shift from collective intelligence to connective intelligence has taken place.

Benefits and challenges: Unlike most courses on distance education, it focuses less on how psycho-technologies**.**

What was the context? The context is higher education

When was it designed Before covid

Usability: This resource is easy to use for target group and for other stakeholders involved.

Skills and competences required: No particular skills and competences are required.

Tools, Means and Media: Videos, Internet connection

Examples of implementation: UNINETTUNO university

4

Title: How the world of distance learning has changed

Training material or resource? Resource

Explain the training material/resource. Video (15min). It is an interview to Maria Amata Garito, the Rector of Uninettuno Telematic University. The Rector explains how to create a technological network of intelligences that, with no limits of space, time and place, develop knowledge and know-how. The Rector also describes new university model of the International Telematic University UNINETTUNO.

Target group and stakeholders involved: Higher education, supporting individual universities and teachers
Evidence-based: UNINETTUNO webpage Link:https://www.uninettunouniversity.net/it/mediagalleryplayer.aspx?VideoFile=mediagallery/mediag/interviste/inertvita-prof-Garito-studenti.mp4

Methodology used to collect information on this practice: Video lesson, webinars

What are the characteristics that makes this a good practice? The main didactic tool of the International Telematic University UNINETTUNO is the learning environment on the Internet, where teaching and learning are carried out in 6 languages - Italian, English, French, Arabic, Greek, Polish - and allow the implementation of a psycho-pedagogic model characterized by the passage:

- from the centrality of the teacher to the centrality of the student;
- from the transmission of knowledge to the construction of knowledge
- from the integration of theory and practice;
- from passive and competitive learning to active and collaborative learning.

Benefits and challenges: Good practice from a telematic university

What was the context? UNINETTUNO context

When was it designed Before covid

Usability: This resource is easy to use for target group and for other stakeholders involved.

Skills and competences required: No particular skills and competences are required.

Tools, Means and Media: Internet connection

Examples of implementation: Higher education, universities

Best practices from other institutions

This section collects best practices from several European institutions. All the practices are in English and the main target are higher educational professors and students. Some of these practices are the product of an international project, other are the output of research/studies and other are strategies used during the pandemic crisis when education was forced to move online.

1

Title: Sharing open education practices using technology

Training material or resource? Resource

Explain the training material/resource. E-platform and e-book resources created to share open educational practices and literature. The video library can be browsed by class size, subject and technology.

Target group and stakeholders involved: Higher educational teachers from several disciplines

Evidence-based: Erasmus+ project 'SHaring Open educational practices Using Technology For Higher Education' (SHOUT4HE), https://library.shout4he.eu/

Methodology used to collect information on this practice: Webpage of the project

What are the characteristics that makes this a good practice? The practice has been created by the collaboration of five university partners (Bordeaux, Cardiff, Hasselt, Limerick, Nice), in four countries (Belgium, France, Ireland, the UK), all of whom are involved in HE teacher education.

Benefits and challenges: Videos are short and easy to understand. Knowledge came from experts in higher education from different countries and background who have experimented those practices. Digital technologies are widely used in higher education, but recent evidence suggests they are not always

effective for teaching, learning, and indeed creative inquiry in higher education. Higher education institutions should therefore 'prioritize and recognize' ongoing learning about the use of technology by their staff to make a positive impact.

What was the context? Higher Education

When was it designed? The project started before Covid-19 (2018) and ended during pandemic (2021)

Usability: Online Education

Skills and competences required: No particular skills and competences are required

Tools, Means and Media: Internet, video

Examples of implementation: There is no available examples of implementation, but all the material is available in open access

2

Title: The Flipped Classroom and the Development of Competences: A Teaching Innovation Experience in Higher Education.

Training material or resource? Resource

Explain the training material/resource. This study presents a teaching innovation experience that is based on the flipped classroom methodology, with the following three objectives. Objective 1. To discover whether there are significant differences in the acquisition of knowledge among first-year students of the subject of "Theory and History of Physical Education, Physical Activity and Sports" of the degree of Physical Activity and Sport Sciences at the University of Seville (Spain) after the application of the flipped classroom methodology; Objective 2. To analyse the impact of the methodology on the competence levels of the students; Objective 3. To determine the satisfaction of the students with such a methodology.

Target group and stakeholders involved: Higher educational students and indirectly teachers

Evidence-based: Sevillano-Monje, V.; Martín-Gutiérrez, Á.; Hervás-Gómez, C. The Flipped Classroom and the Development of Competences: A Teaching Innovation Experience in Higher Education. Educ. Sci. 2022, 12, 248. https://doi.org/10.3390/educsci12040248

Methodology used to collect information on this practice: mixed methodology that combines quantitative and qualitative approaches. 136 students (academic year: 2019–2020) in the subject of "Theory and History of Physical Education, Physical Activity and Sport" of the degree of Physical Activity and Sport Sciences of the University of Seville were involved. To respond to Objective 1, a Kahoot was performed, with the aim of testing the previous knowledge of the participants. The Kahoot consisted of 15 questions. With regard to the key competences that are referred to in Objective 2, an evaluation on a scale of 1 to 4 has been carried out. To respond to Objective 3, an ad hoc questionnaire was created to determine the satisfaction of the students with the teaching methodology that was applied.

What are the characteristics that makes this a good practice? This study presents an innovation experience in the university scope that is based on the flipped classroom methodology as a response to the methodological changes that are required in order to endow students with knowledge and competences in the scope of higher education. With regard to the acquisition of knowledge by the students before and after the application of the methodology in the different blocks of the subject, it was concluded, with a 95% confidence interval, that there were significant differences between the acquisition of knowledge before and after the application of the flipped classroom methodology. This assertion was corroborated with the Wilcoxon's test. Of all the students, 87.1% gave positive valuations to the methodology that was used in the classroom. This work shows that the students acquired learning in an autonomous and collaborative way, thanks to the facilitating role of the faculty members, who provided the resources to the students for that purpose. Lastly, with regard to the third objective, the satisfaction of the students with the teaching methodology was positive in all the areas that were evaluated (evaluation and revision of the theoretical and practical credits; methodology used and communication system; and attention received from the faculty members).

Benefits and challenges: With regard to the students, it can be seen that the type of activities that are proposed in this research, and within the flipped classroom methodology, tend to develop soft skills in the students, in addition to the specific knowledge and competences of the subject matter. This method allows the students to retain a greater amount of content and to analyse the resources attentively and critically as well as to improve their learning outcomes.

What was the context? Higher Education

When was it designed? During Covid-19

Usability: it is not limited to specific subjects

Skills and competences required: Teachers have to ideate the classroom using this methodology from the beginning.

Tools, Means and Media: No particular tools are needed

Examples of implementation: The provided example

3

Title: The Best Pedagogical Practices in Graduate Online Learning: A Systematic Review

Training material or resource? Resource

Explain the training material/resource. The article is a collection of best pedagogical practices in graduate online learning. best pedagogical practices associated with achieving the most significant educational outcomes for online graduate students include positive academic attitude towards online education, and timely, consistent teacher-student communication.

Target group and stakeholders involved: Higher education professors

Evidence-based: Pardino, A., Gleyz-er, I., Javed, I., Reid-Hector, J., & Heuer, A. (2018). The Best Pedagogical Practices in Graduate Online Learning: A Systematic Review. Creative Education, 9, 1123-1144. https://doi.org/10.4236/ce.2018.97083

Methodology used to collect information on this practice: Systematic review with a total of twenty-four studies published between 1995-2017. Mainly quantitative and mix studies were taken into account. The following specific outcomes have considered to determine the best pedagogical practices for online graduate learning: Student retention rates, Competency with technology, Teacher professional development, Timely degree completion, student engagement, Development of enhanced online educational approaches, Enhancement of student satisfaction and motivation.

What are the characteristics that makes this a good practice? The accurate selection by means of a systematic review

Benefits and challenges: Strategies and tools are provided in order to improve students motivation (weekly teacher-student discussion), engagement (pre and post learning assessment), satisfaction (consistent communication and interaction). Moreover, it has been highlighted the importance of having initial students orientation, readiness identification and technical support, as well as timely, clear and consistent communication between faculty and online graduate students

What was the context? Higher Education

When was it designed? Before Covid-19

Usability: Online Education

Skills and competences required: depending on the practices

Tools, Means and Media: Internet, video

Examples of implementation: Each practice is the result of a quantitative or mix method study

4

Title: Co-designing educational content with the professional sector: developing a MOOC for cultural heritage in Europeana context

Training material or resource? Resource and training

Explain the training material/resource. MOOC created by Leuven university: with consortia including University researchers, Cultural Heritage Institutions, Tech companies and digitalisation experts. It is a self-paced MOOC that addresses how Cultural Heritage Institutions and researchers can use the Digital to engage citizens and learners to collaboratively develop high quality collections
Co-designing

Target group and stakeholders involved: Higher education professors

Evidence-based: https://www.edx.org/es/course/creating-a-digital-cultural-heritage-community

Methodology used to collect information on this practice:

What are the characteristics that makes this a good practice? The MOOC was made in a partnership between two projects, Kaleidoscope and CultureMoves. Content was provided by two universities, KU Leuven and Coventry University, and Several Cultural Heritage Institutions, such as KIK-IRPA in Belgium, CRDI in Girona, and the Photo Agency TopFoto in the UK. Institutions and researchers can use the Digital to engage citizens and learners to collaboratively develop high quality collections. It is an innovative way to make distance education more collaborative.

Benefits and challenges:
MOOCs allow universities to create content together with professional organisations from the field of interest, and engage students, stakeholders and the general public to contribute.

What was the context? Higher Education

When was it designed? Launched at the beginning of COVID-19 pandemic (March 2020)

Usability: Online Education

Skills and competences required: No particular skills and competences are required.

Tools, Means and Media: Internet, video, user interactions involve tools such as WITHculture, where learners can search heritage collections to build their own stories and galleries, WITHCrowd, where learners can annotate collections, MovesCollect and MovesScrapbook, which allow people to annotate dance performances, photographies.

Examples of implementation: Leuven University

Additional information:

Title: Virtual Teachers' Toolbox

Training material or resource? Resource

Explain the training material/resource. The virtual toolbox for teachers is a sophisticated tool for developing Open Online Distance Learning (OODL) courses which means open, online, flexible and technology enhanced education (OOFAT). The toolbox is the output of the VTT-BOX European project (2017-2019) which used a strategic cooperation between formal and non-formal/informal educational providers using ICT based teaching and the enhancement of digital integration in learning. It enhanced teachers' professional development and supported students' acquisition of values, skills and competences.

Target group and stakeholders involved: Higher education professors

Evidence-based: https://www.oercommons.org/groups/virtual-teachers-toolbox-vtt-box/4427/

Methodology used to collect information on this practice: Information is available in open access

What are the characteristics that makes this a good practice? The practice has been co-created by the 5 partners of the project: Colegio Internacional Costa Adeje (Spain), Europäische Bildungsinitiative (Austria), I.T.S Vittorio Veneto Salvemini (Italy), University of Crete (Greece), Swedish Association for Distance Eduaction (Sweden). The mixture of of the partners ensured the necessary competences, values, skills and knowledge for developing an innovative approach to OODL. The VVT-Box methodology focused on items which are either not yet common or still missing in Open Online Distance Education as: innovative approach to OODL, appropriate quality enhancement framework, innovative and completely new motivating self-evaluation method for students (Mandala method), new developed innovative tool for course creators, special training course for teachers to implement the new methods in course creation, transferability and evaluation guide to enable the transfer to other educational fields.

Benefits and challenges: The teachers' toolbox is a web-based service for course developers and assists teachers in creating high quality distance learning courses. The toolbox offers 7 different tools to assist the teacher in course creation or to impact to course evaluation and amendment. These tools are: Developing the course structure, List of (possible) activity, List of quality criteria (split in three different items), Aid for course evaluation, Tool for the competency definition, Tool to create the self-evaluation mandala, Checklists for the course (evaluation of outcomes, quality enhancement, active learning)

What was the context? Higher Education

When was it designed? Before COVID-19

Usability: Online Education

Skills and competences required: No particular skills and competences are required.

Tools, Means and Media: Internet, video

Examples of implementation: There is no available examples of implementation, but all the material is available in open access

Additional information: Webpage of the project https://www.vtt-box.eu/project/

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