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DIGITAL FOR LITERACY AND FUTURE EDUCATION

The official newsletter of the Erasmus + Project Dig4Life

CO-DESIGN OF THE SPANISH EPISODE OF THE DIG4LIFE SERIOUS GAME

Written by Mercedes Ruiz Carreira

At the university of Cadiz (Spain)

Following the initial plan for IO2, after the Training for Trainers program, each project partner has finished the implementation of the Training for Teachers program. This program provides training for secondary education teachers on digital competence frameworks and self-assessment as a previous step to guide the participants in the process of co-designing a local episode for the Dig4Life serious game.

At the University of Cadiz (Spain) was designed to designed to provide interested teachers with advanced theoretical and practical training in the educational uses of digital technologies such as gamification and serious games, among others, and in their application for the creation of tools for self-assessment of the level of digital competence of their students.

In particular, around 25 secondary education teachers from different places in Southern Spain gathered at the University of Cadiz and received theoretical and practical training on the different models for the self-assessment of digital competencies, educational applications of different digital technologies and a method for the design of serious games oriented to the self-assessment of digital competencies of students. In this training program, which made used of the flipped classroom methodology and was taught in a hybrid mode combining online and face-to-face sessions, participants had the opportunity to perform the self-assessment of their level of digital competence using the DigCompEdu, DigComp, and PIAAC models, and to know and use different tools and technologies from a practical point of view.

One of the most important outcomes of this training program was the participation of the teachers in the process of co-creation of the Spanish episode of the Dig4Life serious game. For this, they worked in teams designing the storyboard of the different scenes of the game episode aimed at evaluating the Digital Communication and Collaboration competence area of the DigComp model. After being introduced to the methodology for the co-desing of serious games and analizing the Italian episode that was already designed, the teachers grouped in teams to create the storyboard of the Spanish episode of the serious game. During the process of co-creation, they were assisted by the members of the Dig4Life project from the University of Cadiz, who finally checked, improved and validated the final version of the episode storyboard, submitted for implementation by the Entropy partner.

The next step will consist of running different trials where secondary school students will play the game. The measurement of the results and the feedback from the trials conductes in each of the countries that form the consortium will allow us to evaluate the results obtained and identify actions for improvement.

VIRTUAL HEROES!

The virtual heroes of the Dig4Life Serious Game begin to be voiced

Once the storyboard design for each episode of the serious game has been completed, the Dig4Life project team is now immersed, among other tasks, in the process of dubbing and subtitling all the characters that appear in the game.

The dubbing and subtitling of a video game is a complex process that requires a lot of dedication and work to obtain results that favor the gameplay.

Although the full game will be available in English, the project team decided to develop Italian and Spanish versions of the game available as well.

The University of Cadiz partner is working on the dubbing and subtitling of the game into Spanish. The process they are following to accomplish this task is as follows

First, a translation of the storyboard from the original language, English, to the Spanish language is performed. This step does not consist of a mere translation, but an adaptation that is as faithful as possible to the original version but adapts the expressions originally used to the target culture, in this case, Spanish.

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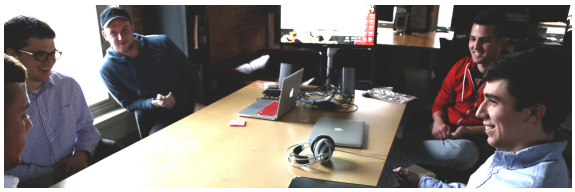
Next, a complete revision of the text is carried out, carefully checking spelling and grammatical correctness, faithfulness to the original version and the quality of any cultural adaptations that may have been necessary. The texts are then distributed among the people involved in the dubbing of the characters. For scene and character's intervention an audio file is created. Subsequently, each audio file is digitally processed to set common settings in the quality of the resulting sound. Due to the nature of some characters, it may also be necessary to add some digital effects to the recorded voice. Once the Entropy team receives the audio files and the text for the subtitles, it can generate the language version of the game episode.

Finally, it is essential to verify and validate the result, checking that there are no errors in the subtitles and dialogues and that they appear at the correct time.

In the case of the University of Cadiz, the team participating in this stage of the development of the game is composed of 10 members who have been working since January on this task, which is now nearing completion.

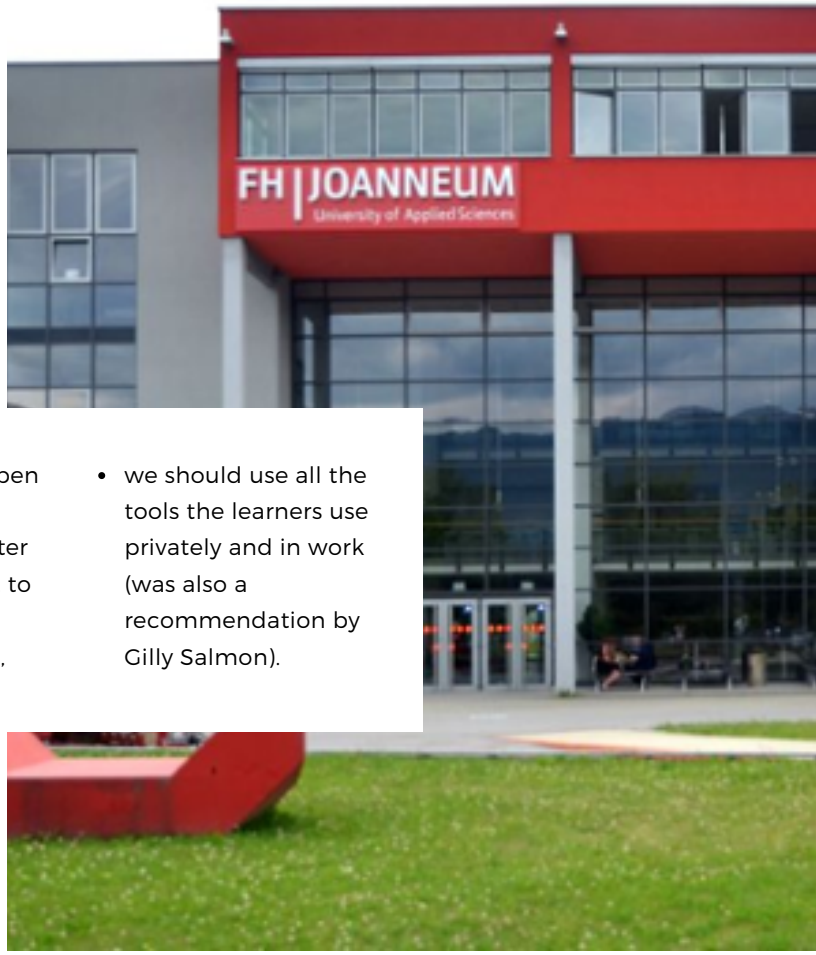


ONLINE & OFFLINE IS EQUALLY USEFUL, FUN, DIFFICULT, ANNOYING

Author: Maja Dragan
Institution: FH JOANNEUM

Dr. Jutta Pauschenwein (Head of ZML-Innovative Learning Scenarios at FH JOANNEUM) believes that:

- teachers need e-competences: online moderation, how to build and structure online learning material, online communication (investment into teacher´s training),
- learners need an open learning space and diverse tasks to foster emergent learning, to learn what they need/want to learn,
- we should use all the tools the learners use privately and in work (was also a recommendation by Gilly Salmon).



The results of the PIAAC study show that wider skills (social skills, health literacy, civic engagement, critical thinking, problem solving or learning to learn), are often neglected, they have essential implications for the well-being including self-esteem and increased social interaction of individuals and society. We as educators must switch from the role of a teacher to facilitator. Facilitation is about creating and providing space for learners to:

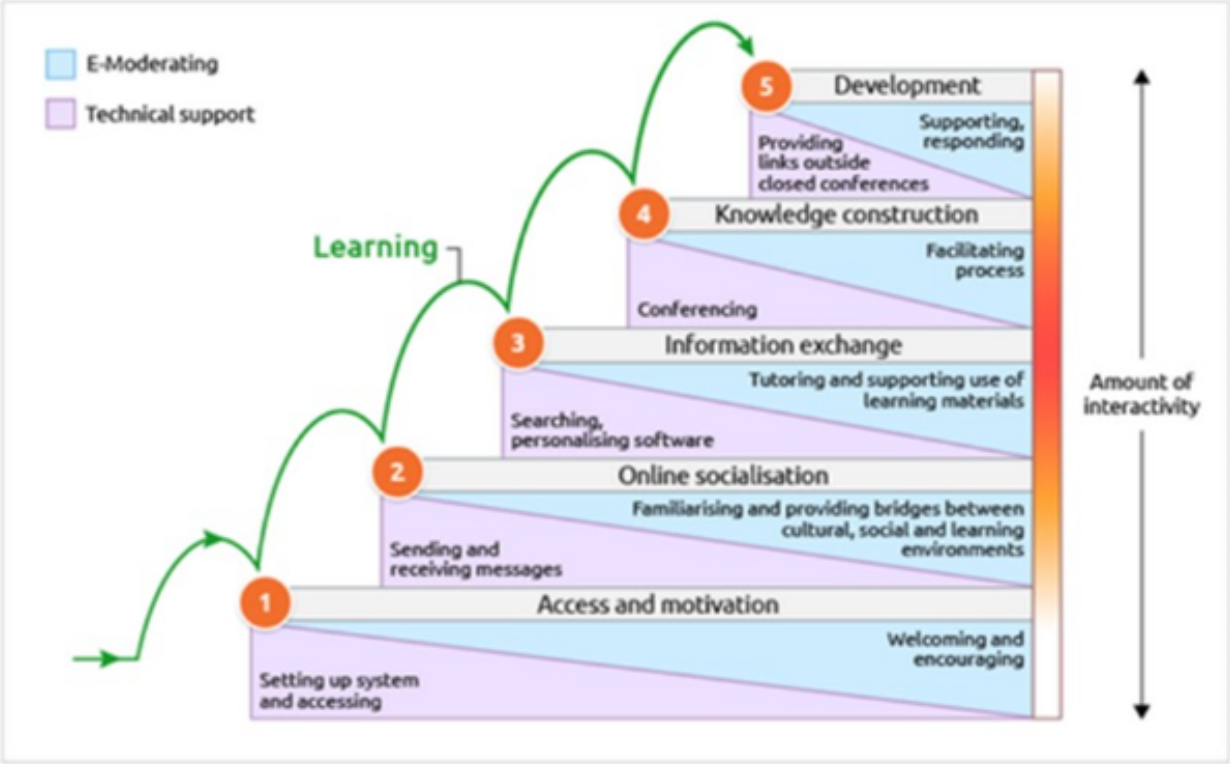
- try out something new,
- reflect on their experiences,
- arrive at new conclusions and
- think about how they would apply these conclusions in their work and life.

In this view people learn for themselves with a bit of help and assistance, rather than have it done to or for them. But to be able to do that, we must learn ourselves, too. The constructivist learning approach states an active role in constructing one's own understanding rather than receiving it from someone who knows.

Learners interpret information from the unique personal perspective of their previous experience (past experience, formal teaching, reading, sharing with peers – with the view that information has to be personalised into knowledge. The Covid pandemic pushed us to the edge, and we had to learn how to deal with online teaching/learning.

With all this in mind the team of FH JOANNEUM created an interesting online training for the teachers, team, and other colleagues from the DIG4LIFE project. The focus of the workshops was online pedagogy, e-tivities, e-moderation and Let ´s make comics! with the aim to:

- Present purpose of e-tivities (see Gilly Salmon model)
- Design online participation
- Support achievement of learning outcomes
- Work together on key learning resources
- Promote a learner-centred, task or problem-based approach
- Challenge and motivate participants to critique, contribute, review, and consolidate ideas in a focused way
- Increase learner engagement
- Save staff time
- Make the course productive and fun
- Easily deploy the newer technologies such as social media
- Find easily purposeful ways of using freely available, topical and/or fun resources within the learning design, and
- Incorporate sound pedagogical principles quickly into teaching and learning.



Model by Gilly Salmon: https://www.gillysalmon.com/five-stage-model.html

Online training with ZML (Innovative Learning Scenarios) team from FH JOANNEUM

TRAINING FOR TEACHERS COMPLETED AND DIG4LIFE SERIOUS GAME IN ITALIAN SCHOOL

Author: Giulia Cecchini
Institution: ITA RM3

The training program, called "Train the Teacher" aimed to 15 secondary school teachers has been designed for 80h of training distributed in 10 modules, and the goals was to:

- Share the objectives of the DIG4LIFE project introducing the evaluation concept in education and training.
- Illustrate the self-assessment tools chosen during the first phase of the project (PIAAC, DigComp and DigCompEDU) bringing Teachers near a shared self-assessment methodology in the European environment (EU - OCSE)
- Experience the Serious Game self-assessment tool and co-build an episode on the competence assigned to each Country (Italy - Digital Safety; Spain - Digital Collaboration; Finland - Digital Creativity; Austria - Digital Literacy; Lithuania - Digital Numeracy; Slovenia - Problem Solving).

Roma Tre University and the Entropy Knowledge Network Company are the entities that conduct this training program.

The Italian teachers carried out this training between April/October 2021; the other partner Countries followed the same path with their 15 teachers between February/May 2022, for a total of 90 teachers involved.
The methodology used was the FLIP (Flexible environment, Learning culture, Intentional content, Professional educator), according to which each module is structured around the execution of multiple online activities - asynchronous and synchronous activity - aiming to elevate the knowledges and provide some room for thoughts and discussion among participants using collaborative tools.
The Italian Teachers with the assigned episode - Digital Safety - was built on four pillars: protection of personal data and privacy, protection devices, health and well-being protection, protection devices.

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TAt the end of the path Trainer for Teachers it's been programmed n. 6 Virtual Coffee dedicated to the construction of a community of practices and the realisation of the product HANDBOOK: a guidance tool shared with all partner Countries for the following activities with the schools.

The high level of professionalisation and participation of some teachers and the intense motivation have been the core of this path; to them goes a heartfelt thanks for the active participation in the DIG4LIFE project. Now the Serious Game DIG4LIFE tool is on test in the Italian School and is developing the digital skills of 150 students all over 10 schools involved: Borghese Faranda Patti School, Institution Enrico Mattei, Ceccano, Liceo Buchner of Ischia, Italian School of Athens, Merendino Capo d'Orlando School, Pilo Albertelli, I.S.G.M. Carbonia, Gullace Talotta Institute..

REVISE, DEVELOP, ADJUST - HOW TO CREATE 6 MULTILINGUAL SERIOUS GAMES IN 6 STEPS

Author: Beatrice Pelati
Institution: Entropy Knowledge Network

The second year of the DIG4LIFE project was dedicated to making the six episodes come to life. Once the "Train the Teacher" program was concluded, Entropy Knowledge Network's challenge was to transform six storyboards into an authentic serious game saga. This process is an extremely creative one, but also requires technical rigour and constant adjustments, through an agile methodology based on standardised cycles of work and constant revision. In summary, the process can be broken down to six steps:

1. Storyboard revision. Narrative serious games offer the opportunity to experiment with a wide range of creative devices. However, to guarantee the game's flow and its didactic value, there are certain constraints that have to be taken into account. Interactions must be fun, but also adequately challenging; feedback must be provided at all times; characters and stories must be coherent across all episodes, despite numerous authors across six nationalities. And, of course, a plethora of technical aspects must be meticulously taken into account.
2. Audiovisual asset creation. Characters have clothes and facial expressions; locations should convey a specific atmosphere; objects actively contribute to the story; environmental sounds are the final touch that provides a three-dimensional feel.

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3 Prototype implementation. Once all assets are finalised, Entropy's technical team, headed by developer Vindice Deplano, implements the episode through a system called Learning Brick, a modular architecture based on prefabricated components, like Lego bricks. In this way it is possible to drastically reduce costs and times, leaving room for the design creativity.

4) Debugging. This is possibly the most important phase. Debugging is an error-removing procedure that allows the games to be fully functional. On one hand, various debugging tools offer an overall screening of the code; on the other, the whole Entropy team play the episode numerous times, actively searching for mistakes.

5. Localisation. Episodes are developed in Italian first, then transferred to Spanish and finally to English. This phase cannot simply be described as "translation" - rather, it is the process of localisation, i.e., the adaptation of linguistic aspects to a specific region, to account for differences in social contexts.

6. Debugging, again. After localization, the partners who author the episode are involved in the debugging phase. To read a storyboard and to play a game is very different, and only by experiencing the game's flow it is possible to imagine some final adjustments. Once everyone is happy, the game is ready to be released.

Of course, these six steps are not sequential. Because of time and technical constraints, most activities have to be carried out in parallel, taking into consideration the stringent dependency relationships among them. Each storyboard has to be translated from English to Spanish and Italian, but only once it is in its final version.

To date, all six episodes in Italian and four episodes in Spanish have been finalised, the remaining two episodes in Spanish and all episodes in English will be completed and collectively debbugged during July and August.

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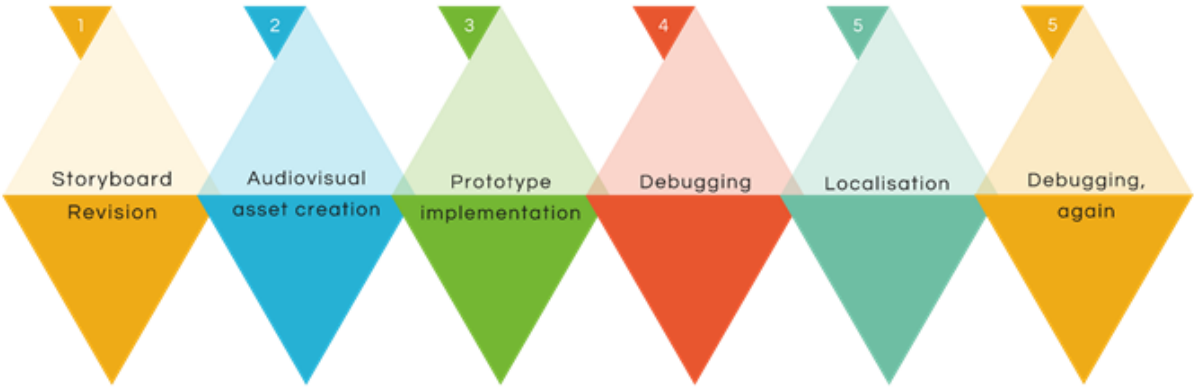

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screenshots from the game

ROMA TRE UNIVERSITÀ DEGLI STUDI
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Klaipeda University
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UCA Universidad de Cádiz
LAUREA
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DEVELOP, DISSEMINATE, INSPIRE: DIG4LIFE AS A VEHICLE TO SHARE INNOVATIVE TRAINING METHODOLOGIES

Author: Beatrice Pelati
Institution: Entropy Knowledge Network

The Entropy team has been intensely disseminating the DIG4LIFE project at EduTech-oriented events with diverse orientations and focuses.

- MoodleMoot Italy, December 2021. MoodleMoots are conferences held around the world, with a focus on encouraging collaboration and sharing of best practices of the open source learning management platform. During the event held in Turin, learning experience designers Michela Fiorese and Angela Macrì presented the DIG4LIFE project, with a focus on the games' ease-of-use and flexibility. In fact, DIG4LIFE episodes can easily be integrated in any Moodle platform, without requiring extensive technical intervention.
- Ren Conference, April 2022. The Research on Educational Neuroscience Conference, organised by UniCusano, aims at offering an opportunity to create a bridge between classical pedagogy and neuroscience, fostering a learner-centred, evidence-based approach to education. The event poses particular attention to the importance of cognitive and affective processes that underlie learning and that should be taken into account when designing learning experiences.

In this sense, DIG4LIFE was met with great interest, and Entropy looks forward to sharing the results of the experimentation in next year's edition.

- Quaderni di comunità, Volume II., 2022 - Quaderni di Comunità is a journal dedicated to study and understanding of cultural, social, organisational and educational complexity, with a strong orientation towards the promotion of a digital culture. The paper DIG4LIFE - Il DigComp in un Serious Game per le scuole superiori (DIG4LIFE - The DigComp framework in a Serious Game for secondary school) describing the DIG4LIFE project in detail will be published in the journal's second issue.

- MIS4TEL, July 2022 - The paper Digital Environment for Literacy and Future Education. A pilot experience of serious game co-design has been selected as a candidate for Best Paper award by the MIS4TEL committee and will be presented by Maria Chiara De Angelis during the 12th International Conference on Methodologies and Intelligent Systems for Technology Enhanced Learning on July 15th.

Among the innovative aspects of the DIG4LIFE project, two stood out. The co-design experience and its impact on the spread of best practices among high school professors was received with enthusiasm and sparked interest and debate. Moreover, particular interest stemmed from the creation of an engaging, interactive experience based on the DigComp 2.1, i.e., the Digital Competence Framework for Citizens, thus transforming the conceptual model into a flexible and simple-to-use learning tool.