

JULY 2023 - NEWSLETTER - ISSUE 4

FACILITATING LEARNING WITH THE LATEST TECHNOLOGIES



The 29 months Erasmus+ Digital FabLab project is coming to an end and the expected outcomes are almost completed!

As previously explained, the project aims to simulate real-world experience built on latest technologies in order to develop learning-by-doing tools and teaching materials that can offer a stimulating experience for students and help them acquire the right skills to produce quality footwear from anywhere in Europe. In a nutshell, education centres and companies in Europe will be able to access or benefit from:

- A free, entirely digital FabLab that uses Augmented Reality to teach and learn practical footwear manufacturing skills.
- A joint international digital course, that could be certified at National level and recognised at EU level for the development of practical skills in footwear manufacturing.
- Trained VET teachers, trainers and coaches on how to implement digital learning-by-doing strategies to guarantee that such tools are well understood and blended into learning programmes to their full capacity.
- A network of European VET providers committed to delivering the most advanced digital practical training in footwear manufacturing.

The Digital FabLab created by the consortium and composed of joint international learning-by-doing courses using augmented reality tools is now available on the project [website](#) for teachers and student to use!

Together with the course for teachers on how to develop innovative and attractive content in Augmented Reality, and a common methodology course for teachers and trainers on how to teach using tools based on Augmented Reality, project partners wanted to contribute to the introduction of engaging, more dynamic and interactive learning methods for students and teachers.

This newsletter focuses on the piloting process and impressions received by participants involved in Portugal and Spain!

Piloting Process in Spain – CTCR

The pilot event in Spain took place at the CTCR in June and involved trainers and teachers. After a summary of the results obtained, the participants had the opportunity to test by themselves the digital FabLab and give their first impressions.

To get the most complete feedback from participants, CTCR divided the questions to them into several categories: presenting the common methodology, collecting information about the e-learning units, general thinking on augmented reality and a special category dedicated to suggestions and improvements.

Presenting the common methodology

On the methodology, CTCR asked two questions to their audience:

- Do you think it is easy to use Augmented Reality for training?
- Do you think that methodologies that encourage the use of practice and experimentation have a long life or is it a passing fad?

Teachers and course directors responded to the first question by saying that integrating technology into education is costly and requires considerable effort. They stressed the importance of introducing these types of devices to students through technology centres, to enable them to familiarise themselves with the technology.

They also stressed the importance of having new materials that focus on experimentation, as developing more practical content requires much more effort. They appreciated very much the fact that this material was free of charge, which they saw as a remarkable resource. Similarly, the students emphasised the effectiveness of the practical content, which helped them to better grasp the concepts and reduces boredom.



Collect information about the e-learning units

Participants found e-learning units to be a beneficial application thanks to the new technologies. Pattern making is a rather personal 'art' and, despite the existence of more or less standard methods, one can encounter difficulties until one creates one's first pattern under the supervision of an experienced person. The access to photographs and a short video demonstrating the process was considered very practical by the participants, as it facilitated their learning process.

General thinking on augmented reality

To better understand participants' views on AR, CTCR asked them two further questions:

- Do you think Augmented Reality has a future in the field of training?
- What aspects do you consider to be the most relevant when incorporating AR into the training methodology?

On the first question, the sentiment and responses were unanimous. Participants saw a promising future, particularly with the emergence of WebAR systems, where students can use their own mobile devices rather than relying on expensive specialised equipment. However, both educators and students expressed admiration for the devices, as they offered unique and engaging learning experiences.



Piloting Process in Spain – CTR

They went on to say that they could get a very accurate idea of the size and appearance of the machines, and that they could get as close as they wanted. This was greatly appreciated by one of the students, who has a severe visual impairment. Thanks to the virtually infinite zoom level, they were able to visualise the footwear equipment in an exceptional way.

CTCR is deeply grateful for the very positive feedbacks from the participants, and especially, for the opportunity to make a positive impact on people's lives with vision impairments, as well as opening up new possibilities for them through these innovative tools.

In terms of suggestions and improvements to be made, CTCR believes that it is imperative to think about and invest on existing innovations that attracts new generations and professionals in the sector in order to ensure progress in the field.



Overall, the activity was well received and perceived as beneficial, which ratifies the value of this academic project in promoting an enriched and innovative learning experience.

Piloting Process in Portugal – CTCP

CTCP piloted the results of the Digital FabLab with a group of representatives from the target group most relevant to the project, namely trainers and trainees. The session took place on 18th of July at CTCP and was preceded by a specific training session on "How to produce AR learning content using BlippAR".

The event was very well received, bringing together 18 participants, including internal and external experts in learning and training methodologies. It was led by the CTCP project team, namely Cristina Marques (management, quality and content specialist), Daniela Freitas (audiovisual and IT content specialist and website designer) and Flora Bastos (communication specialist), and supported by Diana Sousa, an external specialist in technologies and human-computer interaction from the University of Porto (a doctoral student researching immersive escape rooms and a lecturer in information and communication technologies on the Multimedia Production and Digital Games course).

As an example, here is some of the material provided to participants on the use of AR in the training/learning process and how to start producing content using BlipAR:





The piloting session continued with an analysis of the results of the Digital Fab Lab project.

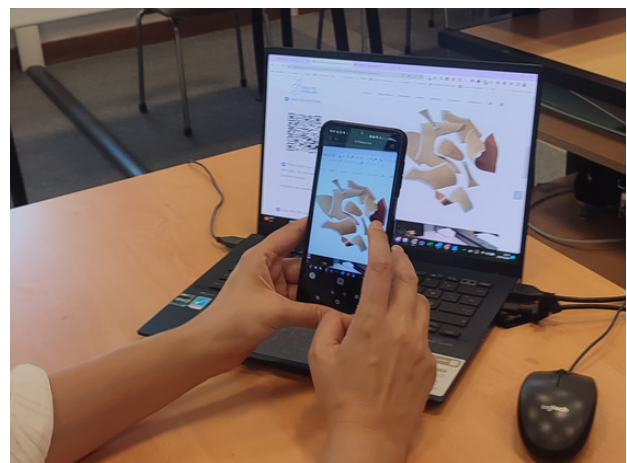
Virtual Shoe Fablab

Virtual Shoe Fablab

After the piloting session, participants were asked to complete the feedback form to evaluate the results of the project, in particular the AR content and its use in training and education.

In the piloting event, after a brief presentation of the project results, participants had a first contact with the Digital FabLab available [here](#) and were asked to fill in the feedback form associated with the QR code.

During the session, participants had the opportunity to attend two complementary presentations which helped them to understand the principles of teaching/learning with augmented reality with Diana Sousa, and to gather information on the behaviour of minds in the learning process, provided by Helena Sequeira (consultant and trainer in human resources, behaviour, emotional intelligence and communication, certified in coaching and practitioner of NLP - neuro-linguistic programming) who helped them to consolidate their opinion on the use of AR in IVET and FEPVC.



Monitoring project results - evaluating results:

If you're curious, take a look at the [form](#) that participants were invited to fill in!

The following conclusions can be drawn from the evaluation of the project results and the use of AR in the training and learning process:

Q1 – What's your opinion on the use of AR in training?

77% of respondents said it was very accessible and easy to use.

Q2 – Do you think the methodologies that have encouraged practice and experimentation will continue?

77% of those questioned said yes, but it is difficult to find suitable content, although 23% confirmed that they were already using it and that it made their work easier.

Q3 – This question aims to determine the usefulness and quality of the content produced by the project.

Opinions varied, although most participants said that the content was of good quality and useful for the training/learning process, even if some of it still needed to be improved.

Q4 – Does AR have a future in training/learning?

92% of those questioned expressed a positive feeling on this subject, as opposed to 8% who are still sceptical.

Q5 – What are the most relevant aspects of AR as a training method? (Participants could choose several options)

The training/learning process is more interesting and motivating - 70%.

It incorporates a very interactive and real practical component - 62%.

The training becomes safer with regard to the use of equipment and other dangerous situations - 54%.

In addition, here are some of the quotes from participants concerning the steering of the project's results, focusing on the content of the AR:

"Something that still needs a 'user experience/user interface' perspective, but which has a bright future."

"It would be important to organise a complementary training course with a heavier workload that would allow each trainee to put into practice a very specific case, so that they would feel a greater need to explore certain points and clarify any doubts."

"I think that in the future, we will be able to move from the virtual environment to the real environment and vice versa in a natural and harmonious way."

THE CONSORTIUM WILL NOW BE ABLE TO CONCENTRATE ON THE FINAL STAGES OF THE PROJECT. THESE INCLUDE A NUMBER OF NATIONAL MULTIPLIER EVENTS IN THE COUNTRIES INVOLVED ON THE PROJECT, AS WELL AS AN INTERNATIONAL WEBINAR, WHICH WILL TAKE PLACE ON 28 JULY FROM 11:00 TO 12:30. YOU CAN FIND MORE INFORMATION AND THE REGISTRATION FORM [HERE](#).



PROJECT PARTNERS



HeartHands
SOLUTIONS
HANDS ON KNOWLEDGE

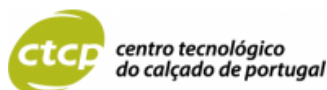


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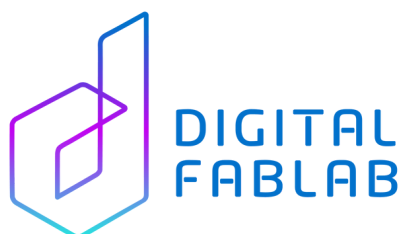
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ERASMUS+ Digital FabLab

**KA226 - Partnerships for Digital
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