

EUT⁺

EUROPEAN UNIVERSITY OF TECHNOLOGY

Deliverable D79

D5.3.4 Online tools

Del. Rel. No 5.16

WP 5

Description: Training for first deployment and resource supply

Comments:

Dissemination level: **PU**-Public

<https://www.univ-tech.eu/phase-1-results>

The content of this deliverable represents the views of the authors only and is their sole responsibility. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

This initiative has received funding from the European Union's Erasmus+ programme under grant agreement 101004088 – Eut – EPP-EUR-UNIV-2020.

Foreword

This deliverable follows on from Deliverable 78 / 5.3.3 which presented the feedback and analysis of the initial phase of student testing which permitted Task 5.3 to identify issues with the experimental model and propose solutions.

In addition to the technical results, questions were raised relating to the perceived purpose of an ePortfolio model, student motivation, ownership, teacher participation and training and user support. The need for comprehensible user instruction and the « Production of training materials for students and teachers » were clearly identified in the conclusions.

Deliverable 79 / 5.3.4 describes the training needs and learning objectives related to the key user profiles (students and teachers), the methodology of the proposed approach and the resources required to achieve successful deployment.

Table of contents

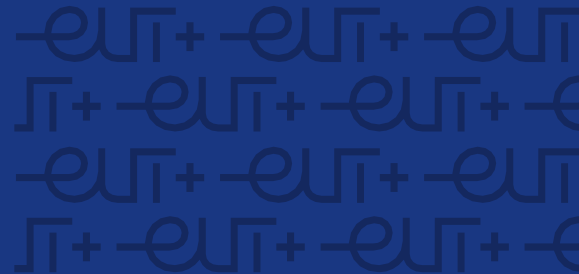
| | |
|--|-----------|
| Introduction | 4 |
| 1 Methodology | 6 |
| 1.1 User needs | 6 |
| 1.2 Teaching and learning methods | 8 |
| 1.3 Learning styles by user | 9 |
| 2 Delivery modes | 11 |
| 3 Content and resources | 13 |
| 3.1 Video content | 13 |
| 3.2 Physical materials..... | 14 |
| 3.3 In-house training sessions..... | 15 |
| 3.4 Community of practice | 15 |
| 3.5 Resources..... | 15 |
| 3.5.1 Human resources | 15 |
| 3.5.2 Material /environmental resources..... | 16 |
| 3.5.3 Financial resources | 16 |
| 4 Results | 17 |
| 4.1 Student focused training..... | 17 |
| 4.2 Teacher focused training | 17 |
| Conclusion | 20 |
| Bibliography | 22 |

Introduction

As with the introduction of any new digital tool or process, implementation of the EUT+ ePortfolio would be successful only if training and resources are made available.

After the conception and the development of the first prototype of the ePortfolio, initial user tests were carried out with a pilot group of EUT+ students. The results of these tests (detailed in deliverable 78 D5.3.3) contributed to the needs assessment of students as a first step in designing a training programme. From a technical viewpoint 80% of student testers reported finding navigating the Portfolio model and the utilisation of basic functions straightforward. “It is easy to navigate once we have understood the different sections and their aim”. This comment underscores the importance of communication of the objectives and benefits of the ePortfolio tool.

Equally, the tests identified the need for “fuller instructions and including examples” to help the student in completing complex sections of the ePortfolio. For example, understanding ‘Final Learning outcomes’ and selecting appropriate/valuable evidence to link to those final learning outcomes in their ePortfolio. Also, knowing how to self-evaluate, reflect on, and write about their experiences in relation to their learning outcomes and professional goals. In constructing the training plan described in this deliverable, task 5.3 considered the principal ePortfolio users, their different roles and objectives: EUT+ students and teachers/educators who evaluate and give feedback and administrative staff responsible for data input. The plan concentrates on the training needs of students as the primary user of the EUT+ ePortfolio and addresses the teachers training.



The proposed delivery mode considers not only the user learning preferences but also the multi-campus model of EU+ presenting at term a potential audience of thousands of teachers and even more student users.

1 Methodology

Task 5.3 reflected on the fundamental questions to be asked when designing training or support systems, taking an account of educational engineering and neuroscience studies that are commonly used to design a training plan tailored to the audience and the issues at stake.

1.1 User needs

As a first step, task 5.3 evaluated the specific characteristics of our target audience: students, and teachers. administrators and technicians responsible for administering the tool. The latter will not be dealt with here, as we have set up a face-to-face training programme, which is necessary for the team's understanding and is run by the consortium developing the tool.

+ Pedagogical objectives for all users:

- Knowing how to and being competent in the use of the ePortfolio tool (technical competence).
- Understanding the objectives and appropriating the value of the ePortfolio
- Understanding the terminologies used within the ePortfolio and response/input sought for each section

+ Specific objectives, skills to acquire for student users: being able to ...

- identify relevant experiences and to describe them
- self-evaluate, to think and write reflexively,
- create and select appropriate evidence as proof of learning outcomes

- present their personal and academic pathway and highlight their skills to teachers and to potential future employers
- + Specific objectives to acquire for teacher users: being able to...
- advise students in building their personal portfolios
 - evaluate students' ePortfolio and provide feedback according to defined evaluation criteria and in line the objectives of the EUT+

1.2 Teaching and learning methods

Several approaches exist for designing teaching scenarios, such as ABC learning design. ABC Learning Design is a collaborative programme and module design method created at University College London (UCL) in 2015 and now used widely across the sector to help develop new programmes and review existing provision. The ABC learning design method offers a comprehensive roadmap for the collaborative design of a training course. The six learning methods¹ are described as: Acquisition (i.e. to read/watch/listen), Investigation, Practice, Discussion, Collaboration and Production.

- Acquisition - Read, look, listen.
- Investigation /Enquiry – critically exploring resources associated with the concepts to be learned.
- Practice – through doing or training.
- Discussion – formulate ideas, question, and argue concepts, aiming to modify understanding (and therefore learning) through self-reflection or feedback from the teacher or peers.
- Collaboration – using exchange with peers and teachers to co-construct knowledge.
- Production: consolidates learning by linking the understanding of concepts with their practical application

¹ <https://abc-ld.org/6-learning-types/>

1.3 Learning styles by user

Task 5.3 also looked at the different learning styles of our key users referring to educational theorist Neil Fleming's VARK model, which identifies four main types of learners: visual, auditory, reading and writing, and kinaesthetic whilst also recognising that learners are individuals, and it is likely that a mix of these styles applies depending on the information that should be learnt and understood.

+ Students

Based on his experience as a teacher, William Haynes, educator and recruiting regional manager for the Princeton Review concluded that offering material in a variety of formats engaged more students and yielded better results. "Engaging more senses and even the mere repetition certainly makes a difference."

Students born between 1997 – 2010, commonly known as Generation Z or Digital natives prefer an independent learning style with less passive but more visual and kinaesthetic learning. They also desire convenience and are open to honest feedback (Issacs et al., 2020).

"This generation of students (has) ...an increased exposure to technology in education characterised by their receptiveness to using technology and ability to multitask (Black and Gen, 2010, Szymkowiak et al., 2021²). They naturally search for information on the internet and flit between sites, apps, and social media feeds, each one forming a different part of their online ecosystem³. At the same time,

² A. Szymkowiak et al. Information technology and gen Z: the role of teachers, the internet and technology in the education of young people. Technol. Soc.(2021) A. Black et al. Who they are and how they learn. Educ. Horiz. (2010)

³ <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-gen-z>

students want to see a clear roadmap of the training, it's purposes and be captivated by the delivery methods.

Whilst aware that there are individual preferences that local educators may be equipped to consider, in general task 5.3 has identified our student learning preferences as:

- Visual and auditory (e.g., multi-media resources)
- Kinesthetics - Active by doing – hands-on practice
- Dynamic pedagogies (e.g., gamification)
- Peer to peer learning (both on-line forums and in off-line discussions/shared experiences)
- Mixed methods

+ Teachers

As professional educators, teachers have a different role and a varied learning style to students. They typically need to understand the fundamentals behind the introduction of in this case the ePortfolio and its utility in their professional practices. As adults they will typically search for the relationship between what they already know and what they are learning, between what they have already done and what they are learning to do. They will seek to understand how what they are learning will help them solve problems and how they can use their new skills immediately. As with student learners, research has shown that not all adults learn the same way. However, certain adult learning preferences are identified in general:

- Reading – teachers are used to reading material and writing text.
- Visual and auditory (e.g., video resources)
- Logical – step by step learning with clear explanations and goals.
- Kinesthetics – testing by trial and error

- Intrapersonal – happy to work alone

2 Delivery modes

This section describes delivery modes explored in relation to the deployment of an EUt+ training:

+ eLearning

eLearning includes all the training delivered through online technologies, (web page, video, pdf, gamification...). eLearning is suited for delivering complex content that needs to be broken down into smaller segments. eLearning courses use different methodologies such as gamification, scenario-based learning, and adaptive learning. These types of modules are successful at holding the learner's interest and permit the trainer to be connected to and give feedback. However, for EUt+ the variety of content may prove complex to produce and deploy on a large, multinational / multilingual scale.

- Video training - is the delivery of training in a direct video format. It is suitable to teach a specific skill, particularly concepts requiring a series of sequential steps. It is considered 'passive' learning. Videos can be watched whenever the user wants and can be downloaded to watch off-line so that internet access is not a requirement. This means videos offer anytime, anyplace content.
- Blended learning – using a mixture of eLearning modules and physical face-to-face, local training sessions usually in a group.

+ Face-to-Face training

In person contact and exchange in training is linked to positive appreciation and learning results. As concluded by Hewett, S., Becker, K. and Bish, A in their 2018-2019

study⁴, 'Where human interaction was present, it was reported to be linked with more active behavioural engagement, higher cognitive engagement and stronger and more positive emotional engagement than where human interaction was absent.'

However, this delivery method less adapted for the EUT+ training plan as it would require more human and logistical resources at each partner campus, and is a more time-consuming, less flexible delivery form.

+ Peer-to-Peer (P2P) learning

Recognised as key learning method and medium for the transfer of information and collaboration between users. Sharing of information between students and teachers is anticipated to evolve naturally between users, as the ePortfolio becomes more actively used. 'P2P learning enhances deeper understanding of concepts, leading to the information being retained in long-term memory, rather than short-term memory.' '....IT offers students the opportunity to learn from one another without any geographical or time barriers.'⁵

Given the physical distance between EUT+ campuses (Spain, Germany, Latvia, Cyprus, Ireland, Bulgaria, Romania, France) and the large number of individuals targeted, online or hybrid delivery modes were judged best adapted. These solutions also provide for individual autonomous learning, and with asynchronous training sequences and resources and tutorials available to participants on demand.

⁴ Hewett, S., Becker, K. and Bish, A. (2019), "Blended workplace learning: the value of human interaction", Education + Training, Vol. 61 No. 1, pp. 2-16. <https://doi.org/10.1108/ET-01-2017-0004>

⁵ Shekhar Chandra & Shailendra Palvia (2021) Online education next wave: peer to peer learning, Journal of Information Technology Case and Application Research, 23:3, 157-172, DOI: [10.1080/15228053.2021.1980848](https://doi.org/10.1080/15228053.2021.1980848)

3 Content and resources

The training should both motivate and inform users, be easy to consume and to the point so that learners can retain more information in a shorter time scale. For example, providing a walk-through of how to use the tool in short bite sized modules.

These training resources are planned to adapt to the schedule of each user: for example, busy, time-short teachers and students who are used to being able to access information content anytime often on portable devices.

3.1 Video content

Effective and engaging for all user profiles, videos or animated visuals will form a major part of the EUt+ training plan for several valid reasons:

Videos are adapted to delivering a bite-sized training which aligns well with the ePortfolio structure of sections/pages. Whilst it is important to understand the objective and aims of the ePortfolio, users can then learn how to fill in each section in a step-by-step process. Young people would be used to present in the videos targeting a student audience.

Videos can be made available to users on different platforms both locally on EUt+ partners websites and on public platforms, for example on YouTube.

Users have the possibility to watch, pause, rewind, and watch again until they feel competent and at ease with using the ePortfolio.

Video resources can be created in-house, on a budget using 'real' users, for example students to better engage with the audience. A single production can then be

dubbed in local languages or replicated by each EUT+ partner. Each video is accompanied by a pdf document that can be downloaded.

Inspiration for a series of videos is taken from examples of video training on eportfolios but not only. For example:

1. <https://www.youtube.com/watch?v=3n8UG3YOOFU> Vancouver Island University, AuburnWrites, Auburn University. “This introductory video describes the four key elements of an ePortfolio -- artifacts, reflective writing, technology, and ethical literacy”.

https://www.youtube.com/watch?v=VJ8zt_HBVXA

2. Vancouver Island University training website provides a good example of a walkthrough of an eportfolio <https://learningmatters.viu.ca/building-your-learning-portfolio>

3.2 Physical materials

Written documents, manuals, or handbooks. These would be used as part of a blended training plan for reference or download. However, printed material is less eco-friendly and costlier to produce than digital content and printing should therefore be avoided. Also, changes to printed material would need to be made to include updates and would incur more costs.

For these reasons, task 5.3 would not propose providing printed user manuals. Those users who wish to have hard copies would be able to download and print online materials. FAQ sheets would be available for reference on the ePortfolio platform, local sites or LMS platforms.

3.3 In-house training sessions

As a part of a blended learning plan, physical training sessions for students and teachers would be offered at each partner campus depending on the availability of resources in local training departments. These physical training sessions would complement the on-line training offered. Mandatory in-house training sessions should be organised to introduce the ePortfolio, its aims and advantages and clarify the roles of both students and teachers.

3.4 Community of practice

It is recommended that an on-line forum for discussion, peer-to-peer exchange, question and answer be set up as part of a training plan. The 'Community leaders'/ animators would be assigned from each EUT+ partner university. Initially be trainers and academic members of staff, experienced student users would contribute to this training resource. Shared online tools such as Whaller, would be required to support those communities.

3.5 Resources

3.5.1 Human resources

- a. Academic advisor: An academic referent / teacher should be assigned for each faculty as a primary point of contact for students, offering guidance on developing content.
- b. IT helpline: An IT specialist would provide technical support and troubleshooting related to the issues. Also, once the training has been set up and is actively in use, IT services would track the number of students completing training modules, visualising videos and downloading pdf documents. The aim being to get an

overview of the level of adherence to the training programme and the effectiveness of the training.

c. Peer Mentors: Experienced students or alumni who have already completed their e-portfolios in the preamble can serve as mentors. They can share their insights, provide examples, and offer feedback based on their own experiences.

d. Online Community Managers: As described in point 3.4 the Community leaders and animators would come from each EUT+ partner university.

3.5.2 Material /environmental resources

a. Audio visual Equipment: Depending on the training format, audio visual equipment like microphones, speakers, and webcams may be required. These resources ensure clear communication, especially during online sessions or when recording video components for e-portfolios.

b. Physical Space: Depending on the training setup, physical spaces like computer labs, classrooms, or dedicated training rooms equipped with appropriate furniture, power outlets, and network connections may be necessary for conducting face-to-face training sessions.

3.5.3 Financial resources

- ePortfolio tool maintenance.
- Training delivery – personnel/trainers.
- Training content development – creation of training materials and resources.
- Training environment – onsite training.

4 Results

4.1 Student focused training

The EUT+ training will include a series of modules that take the learner step by step through the different sections of the Portfolio, explaining how to fill them in both technically and theoretically and giving examples. These modules will follow consecutively but may also be referred to out of sequence. Whilst permitting students' freedom in selecting training modules on-line, deadlines for activities would also be set.

For each training module, a group of resources and activities will be created to actively involve the students. The training programme will cover all the themes necessary to enable learners to progress logically, to motivate and support them in completing their learning objectives. For example :

- + What is the EUT+ ePortfolio and how can it help you?
- + Understanding the final learning outcomes framework for my curricula
- + What personal experiences should I include in my ePortfolio?
- + What professional experiences are relevant to include in my portfolio?
- + Connecting personal and professional experiences with Final learning outcomes
- + What is considered as evidence? How to include and link useful evidence
- + What is reflective thinking and writing? How use this in my ePortfolio?

4.2 Teacher focused training

The usage of ePortfolio should be adopted as part of the overall learning and teaching process. This directive should come from EUT+ rectors. Teachers need to

be equally convinced as students of the value of the ePortfolio as an integral part of 'the academic practices throughout the curricula, learning process and outcomes' (Pospíšilová, Rohlíková (2023)⁶.

Teachers' training should focus on their role and responsibilities in the support and evaluation of the students' work on their ePortfolio. For example, students' ability to perform self-reflection is a crucial skill to be developed, as it strengthens their learning process and enables continuous adaptation to challenges encountered in both higher education and their future workplaces (Pennbrant, Nunstedt, Bernhardsson 2019⁷).

Consequently, special attention should be given to training academic staff in this expertise and providing them with didactics and pedagogical support.

As well as having access to all the student training modules, teachers would be offered sessions focused on their needs. We will also offer them the opportunity to create their own ePortfolios.

Considering the principles of andragogy, the training modules would integrate elements that support teachers' professional practices. The usefulness of these new practices will be highlighted thus acting as a motivational factor.

For example:

- + Introduction to the purpose and usefulness of the portfolio: why add an ePortfolio?

⁶ Linda Pospíšilová, Lucie Rohlíková (2023). Reforming higher education with ePortfolio implementation, enhanced by learning analytics, Computers in Human Behavior, Volume 138, 2023.

⁷ Sandra Pennbrant, Håkan Nunstedt, Lennarth Bernhardsson (2019). LEARNING THROUGH REFLECTION –THE PORTFOLIO METHOD AS A TOOL TO PROMOTE WORK-INTEGRATED LEARNING IN HIGHER EDUCATION. 729-739. 10.21125/inted.2019.0257

- + What are the teachers' roles in supporting, helping and evaluating the students' ePortfolio?
- + How to make the assessments in my course consistent with competences' assessment?
- + What is considered 'useful evidence'?
- + How to develop the student's reflexivity?

Conclusion

Task 5.3 developed the above training plan as a step after the development of the ePortfolio. The described plan lays out the objectives, content and delivery methods for deployment.

The previous deliverable 77 (Annex 1), explain how task 5.3 conceived and constructed an innovative eportfolio model in line with the aims of the EUT+ initiative and with the development of a European Degree. The EUT+ Portfolio supports student mobility, by allowing students to plan, build and present their physical and pedagogical trajectories in an autonomous manner and equally enables EUT+ students to measure and valorise the development of their competences according to the learning outcomes established by the academics and teachers in the clusters.

As constated in deliverable 78 5.3.3 (Annex 2), ‘the reaction from participating students (of the ePortfolio test phase) was overall positive, with over 70% saying that having an ePortfolio appealed to them. Furthermore, feedback from the students showed their genuine interest in contributing to the further development of the model. However, whilst students were interested in having their own ePortfolio, they sought recognition, potential formal evaluation and the acquirement of ECTS for their commitment and the work involved in the process.’ Whether the ePortfolio should be mandatory and whether students will be evaluated on its content and given credits for it remains a question for the Education Committee and the Rectors Board.

Wide scale deployment of the ePortfolio following the initial tests (Deliverable 78) has been held back by technical issues which became apparent during the development and test phase. The open-source platform, Karuta chosen

for its flexibility and potential for ongoing development has not proved to be adequate. The lack of an experienced structure and the limited number of people working on its development did not provide the technical robustness that would make it a reliable tool for wide scale deployment in the long term. It should be noted that the integration of the ePortfolio into the EU+ as a whole, will in phase 2 of the EU+ initiative, depend on WP8 'Common digital services and data'.

The number of unresolved technical and strategic questions, described in deliverable 78, have therefore held back the further development and deployment of the ePortfolio. However, although this training plan has not yet been actioned, it is considered an adaptable and relevant framework for future use.

Bibliography

1. ABC learning design : <https://abc-ld.org/>
2. How the Brain Processes Images.” NeuroscienceNews. NeuroscienceNews, 22 February 2019. <https://neurosciencenews.com/image-processing-brain-10793/>
3. Clerkin E. M, Hart E., Rehg J. M., Yu C, Smith L. B. 2017 Real-world visual statistics and infants’ first-learned object names. Phil. Trans. R. Soc. <https://www.edapp.com/blog/visual-learning-statistics/>
4. <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-gen-z>
5. Avondale College of Higher Education:
https://assessment.avondale.edu.au/examples/e-portfolio_examples.html
6. Highly Effective e-Portfolio Examples From Schools Across the Country/England:
<https://www.suitable.co/knowledge-center/blog/effective-eportfolio-examples-from-across-the-country>
7. <https://krshera.wixsite.com/kelsey-sherard>
8. University of Lethbridge:
<https://www.ulethbridge.ca/education/resources/eportfolios/sample-portfolios>
9. <https://irenewelch.wordpress.com/>
10. Weber State
University: <https://www.weber.edu/Communication/ePortfolio.html>
11. E-Portfolio Ideas <https://www.pinterest.com/roachpatty/e-portfolio/>
12. Portfolio Example on YouTube: <https://www.youtube.com/watch?v=sFctKnnByfA>