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EUROPEAN UNIVERSITY OF TECHNOLOGY

Deliverable 39

D3.5.3 TELANTO Platform

Del. Rel. No 3.12

WP 3

Description: Cloud based university-business collaboration platform TELANTO; pilots implemented in each partner and feedback reports submitted

Comments:

Dissemination level: **PU**-Public

Date: April.2022

FOREWORD TO DELIVERABLE 3.5.3

Task 3.5 was designed to explore shared project-based learning across the EUt+ partners and, in D3.5.3 specifically, to deploy TELANTO, a university–business collaboration platform. TELANTO was chosen as it fosters experiential learning, enabling learners to collaborate on real-world business challenges and enabling educators to integrate this type of learning into their curriculum.

The original objective of task 3.5.3 was to consist of reports of TELANTO's module pilots implemented in each partner institution and feedback received from these.

Due to the COVID-19 pandemic the implementation of the main objective of this deliverable was postponed, but the theoretical background, key aspects, features and functionalities of the TELANTO platform were investigated and evaluated, and also alternative solutions were considered.

To be better prepared for the implementation of such a PBL platform in the future, a survey regarding the digital experiences of staff and students was adapted and run within EUt+ in May 2023. More than half of academics reported their main support for use of digital tools coming from online videos and almost half of the respondents rated the support received from their institution to develop the digital aspects of their role as good or excellent. Such information should prove useful in determining the best methods of supporting lecturers as they start to use TELANTO's platform. Two-thirds of students agreed that the use of digital tools and technologies makes their learning more enjoyable and helps them to understand better, but one-third prefer to learn on their own rather than in groups.

Following careful evaluation and consideration detailed in this document, the conclusion is that in order to successfully introduce an online project-based-learning approach with groups of students from different campuses, we need to put in place the right supports to facilitate this collaboration. To date, while we have a good infrastructure in place, we have not been in a position to mobilize an adequately large community to experiment with this approach. The forthcoming second phase of EUt+ will build on the knowledge and experience acquired to make this original plan a reality.

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1. Introduction

1.1. Deliverable objectives

Task 3.5 was designed to explore shared project-based learning across the EUt+ partners and, in D3.5.3 specifically, to deploy TELANTO, a university–business collaboration platform. TELANTO was chosen as it fosters experiential learning, enabling learners to collaborate on real-world business challenges and enabling educators to integrate this type of learning into their curriculum. The platform and collaboration process were designed to help lecturers and professors source best-fit challenges for their course, as well as oversee their students' work. By working in teams, students develop soft and transferable skills valuable in their future workplace, while exposure to and collaboration with business leaders offer students access to role models and the ability to learn directly from experts in their field. Solving business challenges enables students to apply the knowledge gained during their course in a real-world context. Through challenge-based collaboration, students are also given the opportunity to exercise their creativity and out-of-the-box thinking in coming up with innovative ideas that have the potential to make a real impact on an organization. (See TELANTO- Enabling Successful University Industry Collaboration and Engagement).

The original objective of task 3.5.3 was to consist of reports of TELANTO's module pilots implemented in each partner institution and feedback received from these.

Due to the COVID-19 pandemic the implementation of the main objective of this deliverable was postponed, but the theoretical background, key aspects, features and functionalities of the TELANTO platform were investigated and evaluated, and alternative solutions were also considered.

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1.2. Deliverable context and theoretical background

TELANTO's platform philosophy is underpinned by experiential learning which follows a cyclical process that typically includes the following stages [1]:

- Concrete Experience: Students engage in a direct experience or activity, putting theory into practice. This could involve experiments, field trips, simulations, role-playing, or hands-on projects.

- Reflective Observation: After the experience, students are encouraged to reflect on what they have learned and observed. This might involve analysing the outcomes of the experience, identifying challenges faced, and recognizing successes.

- Abstract Conceptualization: Students connect their experiences and observations to existing knowledge and theories. They try to make sense of what they've encountered and draw broader conclusions or principles.

- Active Experimentation: Based on their reflections and conceptualization, students develop new hypotheses, strategies, or ideas. They then test these concepts in new situations, leading to further learning experiences.

Experiential learning offers several benefits:

- Engagement: Students are more engaged when they actively participate in learning activities, as opposed to passively listening to lectures.

- Retention: Learning through direct experience can enhance retention as it involves multiple senses and cognitive processes.

- Real-world Application: Experiential learning allows students to apply theoretical knowledge to practical situations, preparing them for real-world challenges.

- Problem-Solving Skills: The hands-on nature of experiential learning nurtures critical thinking and problem-solving skills.

- Collaboration: Many experiential activities involve teamwork, promoting collaboration and communication skills.

- Personal Development: Students often develop increased self-confidence and adaptability by navigating real-world scenarios.

- Contextual Understanding: Experiences provide a context that helps students better understand and remember theoretical concepts.

Examples of experiential learning methods include field trips, laboratory experiments, case studies, internships, group projects, including project or challenge based learning, and service-learning initiatives. It's worth noting that while experiential learning is effective, it might not be suitable for all subjects or learning objectives. Careful planning and alignment with educational goals are crucial for successful implementation. As experiential learning

continues to be a prominent teaching approach, educators are constantly innovating and adapting methods to suit various disciplines and learning environments.

Project-based learning (PBL) and challenge-based learning are types of experiential learning that emphasizes active engagement, collaboration, and the application of knowledge and skills to solve real-world problems. In PBL, learners work on projects that are relevant, challenging, and often interdisciplinary. The projects typically require them to investigate, explore, and create solutions, mirroring authentic scenarios they might encounter in professional or everyday life [2]

Project-based learning aligns very well with the principles of experiential learning by:

1. Active Engagement: In both PBL and experiential learning, learners actively engage with the subject matter. Instead of passively receiving information, they take an active role in defining problems, conducting research, and creating solutions. This active involvement enhances their understanding and retention of concepts.

2. Real-world Relevance: Experiential learning emphasizes learning through real-world experiences. PBL takes this a step further by framing learning around authentic problems or tasks. Learners work on projects that have relevance and application beyond the classroom, preparing them for practical challenges and future jobs. This authenticity attracts industry professionals who can provide insights, guidance, and resources to ensure the projects align with current industry trends and demands. This connection enriches the learning experience, as students gain exposure to actual problems, technologies, and methodologies used in the field. Collaboration with industry experts brings also a wealth of knowledge, experience, and networking opportunities. These professionals can serve as mentors, guest speakers, or project advisors, guiding students in developing solutions that reflect industry best practices. Lecturers also benefit from industry insights, enhancing their teaching methods and curricula to stay up-to-date.

3. Application of Knowledge and Skills: PBL encourages learners to apply the knowledge and skills they've acquired to address complex problems. This application bridges the gap between theoretical understanding and practical implementation, a key aspect of experiential learning. Industry collaboration brings a focus on relevant technical skills and soft skills, including teamwork, communication, problem-solving, and project management. Students learn to work in diverse teams, mirroring the interdisciplinary nature of many industry projects.

4. Collaboration and Interaction is a fundamental aspect of both PBL and experiential learning. In PBL, learners often work in teams to complete projects, fostering

communication, teamwork, and the exchange of diverse perspectives, much like experiential learning scenarios.

5. Reflection and Critical Thinking: Both approaches emphasize reflection on experiences. In PBL, learners reflect on their project processes, outcomes, and the challenges they encountered. This reflective practice promotes critical thinking and deeper understanding, which are central to experiential learning.

6. Problem-solving and Decision-making: experiential learning encourages learners to develop problem-solving and decision-making skills through practical experiences. PBL amplifies this by placing learners in complex situations where they must analyze problems, generate solutions, and make informed decisions.

7. Personalized Learning Paths: PBL allows for flexibility in how learners approach projects and solve problems, catering to different learning styles and interests. This personalization aligns with the learner-centered approach of experiential learning.

8. Feedback and Iteration: Both approaches involve a feedback loop. In PBL, learners receive feedback from peers, educators, and self-assessment, enabling them to refine their projects. This iterative process reflects the continuous improvement inherent in experiential learning.

9. Intrinsic Motivation: Both PBL and experiential learning tend to enhance learners' intrinsic motivation. The autonomy, ownership, and authentic nature of projects in PBL contribute to a sense of purpose and engagement.

10. Multidisciplinary Learning: Experiential learning often involves interdisciplinary learning experiences. Similarly, PBL projects often integrate knowledge and skills from multiple subject areas to address complex problems, encouraging a holistic approach to learning.

Overall, project-based learning embodies the core principles of experiential learning by providing learners with opportunities to engage, apply, collaborate, reflect, and problem-solve in real-world contexts. This approach cultivates skills and competencies that extend beyond the classroom and into various aspects of learners' lives.

Digitization has significantly enhanced experiential learning by providing new tools, methods, and opportunities that amplify the impact of hands-on experiences. There is a wide array of cloud-based digital platforms that have been implemented to facilitate experiential learning across various fields and disciplines. These platforms leverage technology to create immersive and interactive learning experiences that engage learners in practical, real-world scenarios.

Project-based learning (PBL) platforms offer a dynamic approach to education that encourages collaboration between students, lecturers, and industry professionals. By integrating real-world projects, hands-on experiences, and practical applications, these platforms bridge the gap between academia and industry. These platforms often focus on providing students with real-world experiences, connecting them with professionals, and allowing them to work on industry-relevant projects. Some examples of such platforms that emphasize experiential learning in collaboration with industry can be found below:

- EduSourced is a platform that connects educators, students, and industry partners to collaborate on real-world projects. Students work on projects provided by companies, gaining practical experience while solving actual industry challenges.

- Portfolium is an e-portfolio and assessment platform that enables students to showcase their skills, projects, and achievements to potential employers. It encourages experiential learning by allowing students to document their practical experiences and connect with industry professionals.

- Nepris is a platform that connects classrooms with industry professionals through virtual sessions. Educators can request industry experts to virtually interact with students, sharing insights, providing real-world context, and offering guidance on projects.

- Piazza is a platform that enhances classroom learning by enabling students to collaborate on assignments and ask questions in a community environment. It can be utilized to bring industry professionals into the conversation, allowing students to interact with experts in a specific field.

- Pathstream partners with universities and industry experts to offer industry-specific training programs. Students learn through hands-on projects that mirror real workplace tasks, enhancing their job readiness.

- RISE by Northeastern University is an experiential learning platform that integrates with industry partners. Students can work on real projects for these partners, gaining practical skills and insights into their chosen field.

- Practicum by Yandex: This platform offers online courses in fields like data science, web development, and design, where students learn through practical projects and real-life tasks. They also provide job placement assistance.

- InStride's Pulse Platform connects employers with educational institutions to offer upskilling and reskilling opportunities to employees. These programs often include experiential learning components that relate to the employees' job roles.

Project-Based Learning (PBL) platforms, as part of Learning Management Systems, should provide a range of functionalities that facilitate effective project-based learning experiences for students and educators. Here are some essential functionalities that such platforms could offer:

Project Creation and Management:

- Tools for educators to create and manage projects, including defining project goals, requirements, and timelines.
- Options to customize project templates based on different subjects and learning objectives.
- Ability to set project milestones and deadlines.

Student Collaboration:

- Features that enable students to collaborate on projects, including discussion boards, group messaging, and shared document editing.
- Real-time collaboration tools that allow students to work together remotely.

Resource Sharing and Access:

- Integration with libraries, databases, and other resources for students to gather research materials and references.
- Easy access to relevant reading materials, videos, and multimedia content related to the project.

Progress Tracking and Monitoring:

- Dashboards for students and educators to monitor project progress and milestones.
- Analytics to track individual and group contributions, helping assess students' engagement and performance.

Feedback and Assessment:

- Mechanisms for educators and peers to provide feedback on project drafts and presentations.
- Rubrics and assessment criteria that align with the project's learning objectives.
- Peer assessment features to encourage students to evaluate their peers' work.

Presentation and Showcase:

- Platforms for students to present their projects, such as video presentation tools or digital portfolios.

- Opportunities for students to demonstrate their learning outcomes through multimedia content.

Cross-Disciplinary Projects:

- Flexibility to create projects that integrate knowledge and skills from various disciplines.

- Collaboration between educators from different subjects to design interdisciplinary projects.

Real-World Relevance:

- Ability to incorporate real-world challenges, industry problems, or community issues into projects.

- Integration with external organizations, businesses, or community partners to provide authentic contexts for projects.

Mobile Accessibility:

- Mobile-friendly interface that allows students to access and contribute to projects from their smartphones or tablets.

Scaffolding and Support:

- Built-in guidance, prompts, and resources to help students overcome challenges during the project.

- Support for differentiated instruction to accommodate varying levels of student readiness.

Reflection and Metacognition:

- Features that encourage students to reflect on their learning process, problem-solving strategies, and outcomes.

- Opportunities for students to analyse what they've learned and how they've grown throughout the project.
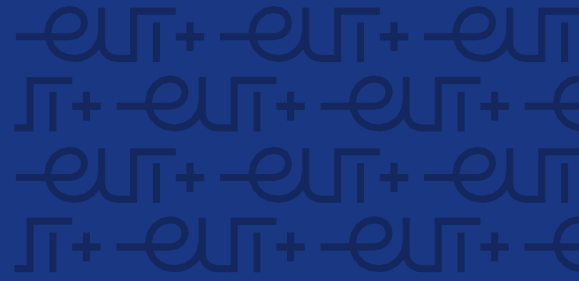
2. RESULTS

2.1. Description and Evaluation of TELANTO's Platform

TELANTO's company solution was identified during the EUt+ application phase as a common Challenge-Project Base Learning platform for all partners to facilitate university-business collaboration by connecting students with real-world challenges presented by companies. By implementing this platform students would have the opportunity to work on these challenges and propose innovative solutions, gaining practical experience and potentially catching the attention of companies seeking talented individuals.

TELANTO aims to be the worldwide leader in experiential learning, enabling learners all around the world to collaborate on real-world business challenges and enabling educators to integrate experiential learning into their curriculum. The company's platform and collaboration process help professors to source best-fit challenges for their course, as well as oversee their students' work. Solving business challenges enables students to apply the knowledge gained during their course in a real-world context. By working in teams, students develop soft and transferable skills valuable in their future workplace. Exposure to and collaboration with business leaders offer students access to role models and the ability to learn directly from experts in their field. Through challenge-based collaboration, students are also given the opportunity to exercise their creativity and out-of-the-box thinking in coming up with innovative ideas that have the potential to make a real impact on an organization

The TELANTO platform and collaboration process have been structured uniquely to ensure the best possible collaboration experience for all parties involved. By bringing real-life business challenges into the university classroom, Dr. Acosta-Flamma saw the potential to revolutionize talent recruitment and innovation practices. TELANTO developed its custom platform to connect companies and students across the world and enable them to collaborate virtually. The company is structured on two pillars: the network – which brings together universities and companies of all profiles from all around the world, and the platform, which hosts the collaborations. Industry partners have to formulate a Call for Solutions, explaining their business challenge and what they expect the students to deliver. On the other hand, the professor writes a Call for Challenges, which is more than a course syllabus. In this syllabus, they indicate what types of tasks their students are equipped to address. Both parties are invited to a meeting before confirming their collaboration. Then, students, challenge sponsors, and professors join a unique virtual collaboration space on the TELANTO platform. Students have access to all the information about the challenge, as well as several helpful project management features. The professor can set milestones that facilitate structuring and monitoring the collaboration. The challenge sponsor can also view the students' progress and engage with them via a discussion board. Finally, the professor and company representative give students feedback on their solution and performance at the end of the collaboration.

Some key aspects of TELANTO are listed below:

- Project-Challenge-Based Learning: TELANTO offers a platform where companies can post real challenges and projects they are facing. These challenges are then presented to students as learning opportunities.

- University-Industry Collaboration: TELANTO acts as a bridge between academia and industry, allowing students to work on projects provided by companies. This collaboration helps students gain practical experience and develop skills that are relevant to the job market.

- Multidisciplinary and Intersectoral: TELANTO promotes multidisciplinary and intersectoral collaboration. This means that students from various academic backgrounds can participate in projects that may span different industries, providing a diverse learning experience.

- International Reach: TELANTO's platform supports international cooperation, enabling universities and companies from different countries to connect and collaborate. This international exposure can be valuable for students seeking a global perspective.

- Employability: TELANTO aims to improve students' employability by providing them with hands-on experience, networking opportunities, and exposure to real-world challenges. This can make students more competitive in the job market.

- Academic Business Network: TELANTO's Academic Business Network is a key feature that brings together educators, students, and industry professionals to create a dynamic learning environment.

Although the interface between the public-private sector is already highly interactive and productive, the university-business cooperation lags collaborative technologies that equip students with future skills that match labour market demands. TELANTO estimates that providing challenge-based education, which is increasingly international, multidisciplinary and intersectoral, at larger scale, through TELANTO's Academic Business Network will shorten the university-to-work transition and increase employability.

In Feb 2022, a demonstration session of TELANTO's platform was organised. During this 2 hr session, the funding CEO of TELANTO, Dr Christian Acosta-Flamma, demonstrated to T3.5 liaisons key features and functionalities of the platform.

TELANTO's platform includes features such as:

- Challenge Posting: Companies post real challenges they are facing, spanning various industries and sectors.

- Student Engagement: Students from participating universities can browse through the challenges and select those they are interested in working on.

- Solution Submission: Students submit their proposed solutions to the challenges, showcasing their creativity and problem-solving abilities.

- Evaluation and Feedback: Companies review the submitted solutions and provide feedback or further engagement with promising students.

- Talent Identification: Companies use the platform to identify standout students who demonstrate exceptional skills and potential for future internships or job opportunities.

- Networking Opportunities: The platform includes networking features that allow students to connect with industry professionals.

- Collaborative Learning: Students might have the chance to collaborate with peers from different disciplines, promoting interdisciplinary learning.

- Skill Enhancement: Students can enhance their practical skills by tackling real challenges faced by companies.

- Industry Insights: Students gain insights into real-world industry challenges and trends.

Depending on course learning objectives, field of study and the level of degree three different expected outcomes can be defined as part of the collaboration description:
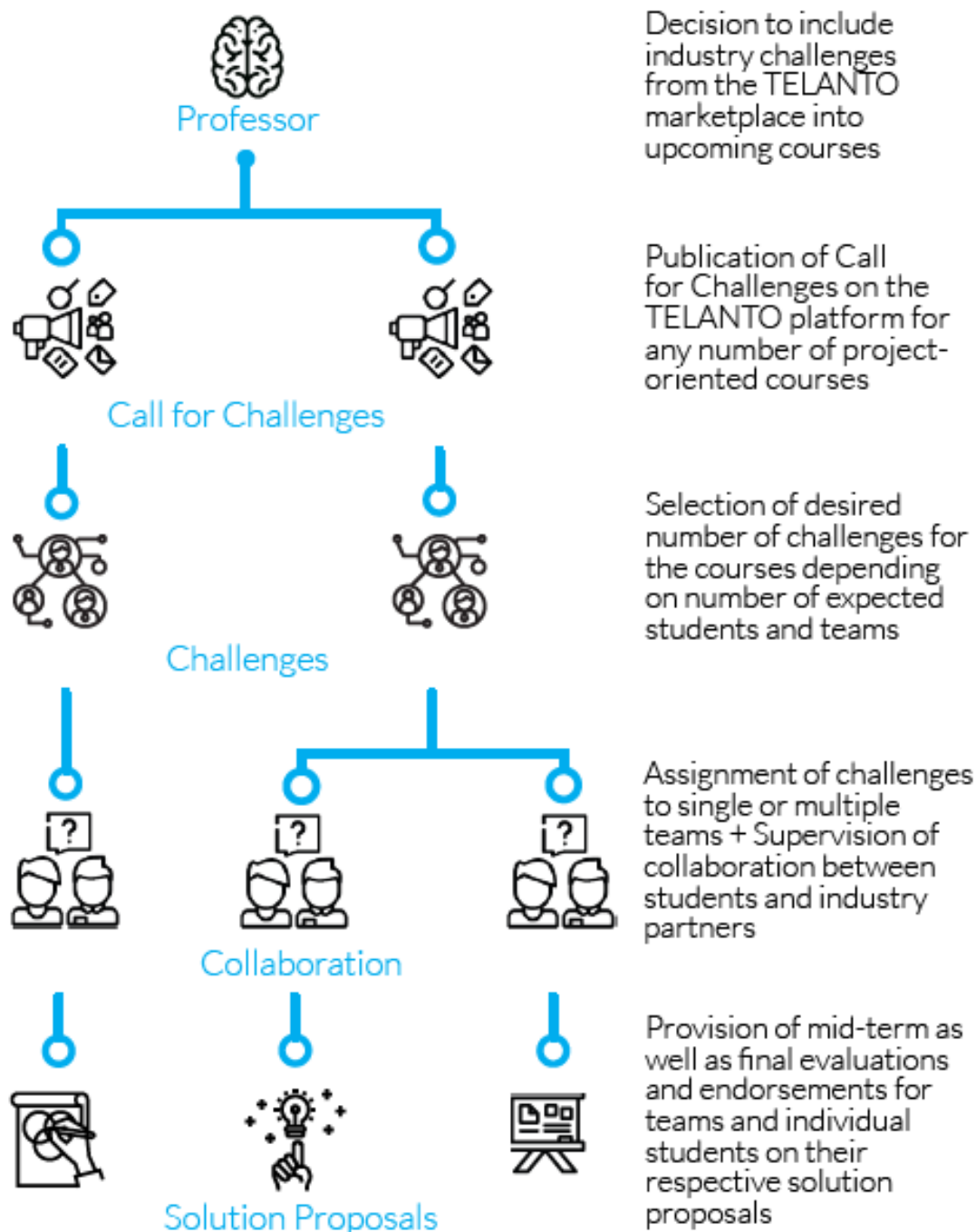
1/ New ideas & concepts

2/ Analysis, tests & reports

3/ Prototypes & minimum viable products (MVPs)

A typical TELANTO process is presented below [3]:

Manage Collaborations in TELANTO

Collaboration Scenario

Professor — Decision to include industry challenges from the TELANTO marketplace into upcoming courses

Call for Challenges — Publication of Call for Challenges on the TELANTO platform for any number of project-oriented courses

Challenges — Selection of desired number of challenges for the courses depending on number of expected students and teams

Collaboration — Assignment of challenges to single or multiple teams + Supervision of collaboration between students and industry partners

Solution Proposals — Provision of mid-term as well as final evaluations and endorsements for teams and individual students on their respective solution proposals

Co-funded by the European Union

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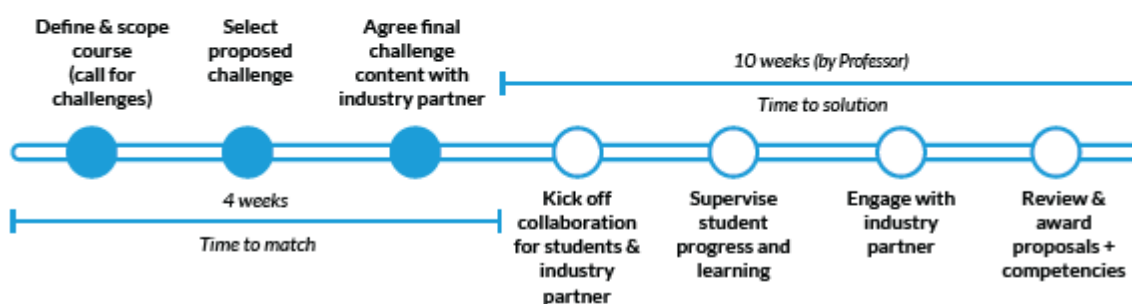RIGA TECHNICAL UNIVERSITY

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A typical timeframe for a PBL module / challenge with collaboration with industry/NGO partners on a TELANTO platform is 14 weeks long which suits a typical academic module [3]:

TELANTO's Academic Business Cloud provides a series of ready-to-use, user-based processes: 1) students are given access to project-creation and bidding, and 2) professors & digital mentors access to idea evaluation and selection processes. TELANTO gives instructors the ability to set up and manage these collaborations. From their TELANTO accounts, lecturers/ instructors can share information about their course, view potential challenges, and manage student teams for each project. Particular phases of a typical TELANTO based course are [3]:

Course Revision + Challenge Proposal

2

We will review your course, ask for more information (if necessary), and send you a selection of challenges that match your course details and objectives.

Proposed Challenge Revision

3

Upon receiving the selction of proposed challenges from TELANTO, you may review the challenges and determine which ones have the potential to fit your course best. Let us know which challenge(s) you would like to know more about.

Challenge Scoping Session

4

Once we know which challenge(s) you would like to know more about, we will organize a challenge scoping session with the respective industry partner(s). In the scoping session, the objective is to share more insights with the company representative, to see if the collaboration is a match.

Challenge Selection

5

After understanding more about the challenge(s) with help from the company representative(s), you can then choose which challenge(s) fit best with your course. This is the challenge(s) you will implement into your course for your students to work on.

Challenge Pitching Session

6

If there is more than one challenge you wish to proceed with, we will organize pitching sessions; 15 minute sessions where the company representative pitches their challenge to the students and answers some questions. This will help you, as the professor, divide up the teams based on student preference.

Challenge Kick-Off

7

The company representative can be more explicit in their goals and approach, since they are already working with the assigned team/s. This is the time to ask more detailed questions and agree on `project management.

Collaborate

8

Carryout your collaboration over designated timeline. You will work through the TELANTO platform throughout the entirety of your collaboration and have regular check-ins with your company representative(s).

Collaboration End + Feedback

9

Students will give their final presentations with the company representative and then receive an evaluation, to rate the industry sponsor (they also give their feedback regarding the solution and team) so there is valuable input for improvement.

C4C Renewal

10

After the collaboration comes to an end and the academic term finishes, you have the ability to upload the same course to be considered for industry challenges. You can also add a new course for the same experiential learning competent!

Your students also have the ability to stay in contact with their industry representative for future

WP3.5 liaisons got free access to the platform to evaluate its functionalities and it was confirmed that this PBL platform has many advantages such as:

1. User-Friendliness (the platform's user interface and overall usability): is intuitive for both lecturers and students to navigate and use effectively.

2. Content Quality: is up-to-date, and aligned with educational standards.

3. Customization and Flexibility: allows lecturers to customize PBL projects to meet the specific needs of their students and classrooms and adapt to diverse teaching and learning environments.

4. Assessment and Feedback: provides opportunities for formative and summative assessment, as well as constructive feedback to help students improve.

5. Collaboration Features: has discussion boards, group project tools, and communication options that encourage teamwork and peer learning.

6. Integration with Other Tools: is integrated with other educational technology tools and systems, such as learning management systems (LMS).

7. Progress Monitoring: provides lecturers with insights into student progress: tracking participation, completion of tasks, and performance on assessments.

8. Data Security and Privacy: complies with GDPR.

9. Technical Support and Training: offers training resources to help users make the most of its features.

10. Alignment with 21st-Century Skills: promotes the development of 21st-century skills such as critical thinking, communication, collaboration, and creativity.

11. Scalability: is scalable and can accommodate different educational contexts.

12. Research-Based Pedagogy: is based on research-backed pedagogical principles and best practices for project-based learning.

13. Community and Support Network: fosters a community of educators who can share best practices and collaborate on the development of new PBL projects.

14. Feedback Loops for Improvement: has mechanisms for collecting user feedback and using it to continually improve the platform's features and content.

15. Student Engagement and Motivation: enhances student engagement and motivation in the learning process.

TELANTO's Platform was identified and selected during the EUt+ application phase and one of main tasks of the WP3.5 was to implement pilot courses using this PBL platform and evaluate its effectiveness and usefulness with feedback provided by lecturers and students. Unfortunately, the implementation of this task coincided with the COVID-19 pandemic which had a profound impact on the delivery of modules and the usage of virtual learning environments (VLEs) in our institutions. The most significant change was the rapid shift from traditional, in-person classroom instruction to online learning. This transition was necessary to reduce the spread of the virus and maintain educational continuity. Increased Reliance on VLEs (Virtual Learning Environments), such as learning management systems (LMS) like Moodle, Canvas, and Blackboard, became central to delivering educational content. These platforms allowed educators to upload course materials, assignments, quizzes, and conduct discussions online. The pandemic highlighted the importance of making educational materials accessible to remote learners. Educational institutions worked to ensure that students had access to necessary technology and internet connections. Virtual learning environments facilitated both synchronous learning (real-time online classes) and asynchronous learning (recorded lectures and self-paced activities). This flexibility accommodated students with varying schedules and time zones (this is a EUt+ case). Tools like Zoom, Microsoft Teams, and Google Meet became essential for hosting virtual classes and meetings. They allowed for real-time interaction between lecturers and students. Traditional exams were often replaced or supplemented with alternative assessments like online quizzes, discussions, essays, and projects to accommodate online learning.

The COVID-19 pandemic accelerated the adoption of virtual learning environments and reshaped the way educational modules were delivered. While it presented numerous challenges, it also pushed EUt+ partners to innovate and adapt to new methods of teaching and learning.

The survey of digital, blended and online learning tools (Deliverable 6.4.1) showed that the common EUt+ VLE platform is Moodle and Office 365 (MS Teams) is commonly used working environment (see table below).

Common Digital Tools	TU Carthegena	TU Cluj-Napoca	Cyprus UT	Hochschule Darmstadt	TU Dublin	Riga TU	TU Sofia	UT Troyes	Comment/Summary
Students (90,075)	6,500	22,000	3,000	15,000	29,700	14,000	9,419	3,056	
Academic staff (6,735)	600	1,400	500	340	1,500	1,043	889	463	
Virtual Learning Environment	Moodle (Local, moving to cloud hosted)	Moodle (L) MS Teams	Moodle (L)	Moodle (L)	Brightspace (Cloud) Moodle (Cloud)	Moodle (L)	Moodle (L)	Moodle (L)	Moodle (L)
Webinar	MS Teams	MS Teams	Big Blue Button Zoom	Big Blue Button Zoom	Bongo Adobe Connect MS Teams	Zoom	MS Teams Google Meet Big Blue Button	Zoom	MS Teams Zoom BBB
Assessment	Moodle	Moodle MS Forms	Moodle	EvaSys	Brightspace/ Moodle	Moodle	Moodle	Moodle	Moodle
Plagiarism	Turnitin	Turnitin	Turnitin		Urkund	Turnitin	Plagramme	Compilatio	Turnitin
Lecture Capture	Local app	Camtasia MS Teams		Local app	Screencastomatic			OBS Studio	Local apps
Email	MS exchange (Office 365)	MS exchange (Office 365)	MS exchange (Office 365)	MS exchange (Local)	MS exchange (Office 365)	MS exchange (Office 365)	Roundcube/ MS Exchange	Zimbra	O365
Personal Productivity	Office 365	Office 365	Office 365	Microsoft Office	Office 365	Office 365	Office 365 Google	Office365	O365
Asynchronous	Moodle MS Teams	MS Teams	Moodle Mahara	Matrix	Brightspace/ Moodle/MS Teams	MS Teams	Moodle MS Teams	Moodle MS Teams	Moodle MS Teams
Synchronous	MS Teams	MS Teams	Moodle/Zoom/BBB/ MS Teams	Skype for Business Matrix	Brightspace/ Moodle/MS Teams	MS Teams	MS Teams	RocketChat	MS Teams

While TELANTO's PBL platform offers a range of features and advantages, there were some concerns that transitioning from Moodle to a commercial LMS such as TELANTO or introducing it to new users may require additional training and resources. As a number of EUt+ students using the TELANTO platform grows and requires more user accounts or additional features, the costs associated with commercial such a LMS platform can increase significantly. This scalability cost can be a disadvantage in the future. There is also possibility to implement the learning platform LMS365 which is a cloud-based platform built into Microsoft 365 to enable organizations to manage learning and training. With its seamless integration with the host of Microsoft's modern workplace tools, LMS365 becomes more than just a platform for employee learning and training management. Increase adoption and get the full benefit of Microsoft 365 investment.

The idea of using the TELANTO PBL platform was embraced positively and endorsed in principle by the relevant groups across EUt+. However, practical issues (not least the advent of COVID19) meant that the planned implementation of pilots with each partner had to be postponed, and these will now be conducted as part EUt+ Accelerate, Workpackage 4. In preparation for this, a survey regarding the digital experiences of staff and students was

adapted and run within EUt+ in May 2023. Based on the Irish National Digital Experience (INDEx) Survey, the aim was to explore the digital experiences of students and staff who teach, highlighting what works better or worse for them and providing an evidence base to inform future decision-making and enhancement of teaching and learning. This survey had been conducted at TU Dublin both pre- and post-COVID19, and provided a benchmark against which EUt+ experiences could be measured.

2.2 Results of a survey regarding the digital experiences of staff and students

COVID19 certainly transformed the use of digital technologies in teaching and learning across Europe, resulting in both positive and negative reactions within higher education. At TU Dublin, for example, the 2019 survey revealed that two-thirds of staff who responded had never taught in a webinar environment: post-COVID, 90% of academics reported that they were teaching online at least weekly. Many TU Dublin staff enjoyed the flexibility of being able to teach remotely, and expressed a wish that this facility should be made available to them post-pandemic. At the same time, TU Dublin students reported diminished enjoyment and engagement with their studies in the digital environment post-COVID: previously more than two thirds of students agreed with the statements "When digital technologies are used on my course I enjoy learning more" and "I understand things better"; post-pandemic, the numbers were less than half in both instances. Students were often dissatisfied with the quality of the online teaching provided, due in part to the lack of interaction in the online environment where lecturers sometimes delivered one-way, hour-long lecturers much as they would in a classroom. Students and staff at TU Dublin expressed much unhappiness with both the quality and quantity of assessments conducted during the pandemic.

Working with this TU Dublin benchmark, the INDEx survey was adapted slightly to explore the digital landscape across the partners post-COVID19 in preparation for the use of digital platforms such as TELANTO. Responses were received from five universities, a total of 164 representing about 3% of eligible staff (the earlier TU Dublin response was 14%). The vast majority (81%) of these were lecturers, over half of them engineers and the majority of whom were male (60%). The vast majority (70%) have worked at their university for ten or more years, and rate the quality of the university's digital provision as good or excellent. More than half report their main support for use of digital tools coming from online videos, and a quarter rely on their peers for this, figures that reflect almost exactly the TU Dublin findings. Just over half (54%) say that they would like digital technologies to be used more in their teaching practice, while just under half (47%) have never discussed teaching with peers via an online network or forum. When it comes to support from their university for adapting to the digital world, in almost every scenario respondents chose to remain neutral on the issue. Less than a quarter agreed that they are given time and support to innovate, and just over 10% of respondents agreed that they receive reward/recognition when they develop digital aspects of their role. Yet almost half of the respondents rated the support received from their

institution to develop the digital aspects of their role as good or excellent. (Full Results from Staff Survey available at this link.) Such information should prove useful in determining the best methods of supporting lecturers as they start to use TELANTO.

Among students, of 493 responses received from four universities, 55% were male, three-quarters full-time undergraduate and over half (57%) were engineering students. The majority (70%) were aged 18–24 and were based fully on-campus. 95% of students reported that they own a laptop, 84% have access to course materials online, and over half (57%) agree with the statement *"My university supports me to use my own digital devices."* 60% say that their university's digital provision is good, excellent or best imaginable. A vast majority (91%) say that *"Digital skills are important in my chosen career",* but less than half (45%) agree with the statement that *"My course prepares me for the digital workplace"*, sentiments reflected almost exactly in the Dublin findings. Two-thirds of students agree that the use of digital tools and technologies makes their learning more enjoyable and helps them to understand better, but one-third prefer to learn on their own rather than in groups (in Dublin the corresponding number was 40%) and just a quarter would like more time working online with others (at TU Dublin the number was 16%). (Full Results from Student Survey available at this link.)

Staff and students were also given the opportunity to comment if they so wished (positively or negatively) regarding their experiences of digital learning and support at your university. Not everybody who completed the survey did so, but of those who took the time to comment, staff tended to speak of the need for support and recognition while calling for a return to classroom-based learning. Students bemoaned the lack of consistency of the digital learning experience and the need to continue providing recorded lectures and better facilitation.

Comments from staff are available at this link

Comments from students are available at this link

Some headlines from the EUt+ and TU Dublin Surveys			
SURVEY Staff who Teach		Students	
EUt+ (May 2023)	TU Dublin (May 2021)	EUt+ (May 2023)	TU Dublin (May 2021)
Staff: 164 responses, 60% male, 81% lecturers, over half of which work in Engineering	Staff, 219 responses, 44% male, 78% lecturers, one-fifth of which work in Engineering	Students: 493 responses, 55% male, three-quarters full-time undergraduate, 57%	Students, 1,652 responses, 80% full-time undergraduate, 47% male, 14% Engineering

		Engineering	
70% have 10+ years working at the university	72% have 10+ years working at the university	70% aged 18–24, 70% fully on-campus, 30% blended/online	72% aged 18-24; 75% fully on campus, 25% blended/online
Over 50% use online videos etc. for support, 26% rely on colleagues	Over 50% use online videos etc. for support, 24% rely on colleagues	95% have a laptop, 84% have access to course materials online, 57% agree with the statement *"My university supports me to use my own digital devices."*	93% have a laptop, 92% have access to course materials online, 68% agree with the statement *"My university supports me to use my own digital devices.*
Over 70% rate the quality of the university's digital provision as good or excellent	38% rate the quality of the university's digital provision as good or excellent	60% agree that university's digital provision is good, excellent or best imaginable	51% agree that university's digital provision is good, excellent or best imaginable
Just over half (54%) say that they would like digital technologies to be used in more in their teaching practice	38% say that they would like digital technologies to be used in more in their teaching practice	Just 1% say they never spend time finding information online; 47% say that *"Online assessments are delivered and managed well."*	Just 3% say they never spend time finding information online; 55% say that *"Online assessments are delivered and managed well."*
Almost half (47%) have never discussed teaching with peers via an online network or forum	About a quarter have never discussed teaching with peers via an online network or forum	Just a quarter of students agree with the statement *"Before I started my course I was told what digital skills I would need."*	22% of students agree with the statement *"Before I started my course I was told what digital skills I would need."*
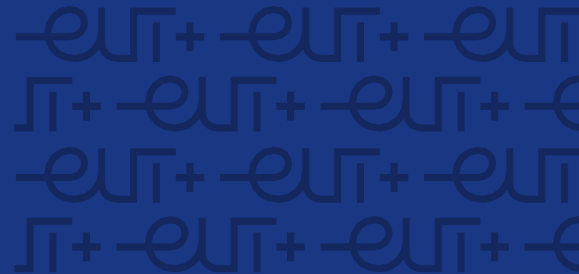
		91% say that *"Digital skills are important in my chosen career", but just 45% agree that "My course prepares me for the digital workplace."*	78% say that *"Digital skills are important in my chosen career", but just 46% agree that "My course prepares me for the digital workplace."*
		60% rate the quality of digital teaching and learning on their course as good or excellent	48% rate the quality of digital teaching and learning on their course as good or excellent
		60% would like more course-related videos and practice questions online	35% would like more course-related videos, 14% want practice questions online
		Half would like more polls and interactive quizzes in class, as well as project-based learning	28% would like more polls and interactive quizzes in class,
		One quarter would like more time working online with others	16% would like more time working online with others
		Two-thirds agree that the use of digital tools and technologies makes their learning more enjoyable and helps them to understand	Two-thirds agree that the use of digital tools and technologies makes their learning more enjoyable and helps them to understand
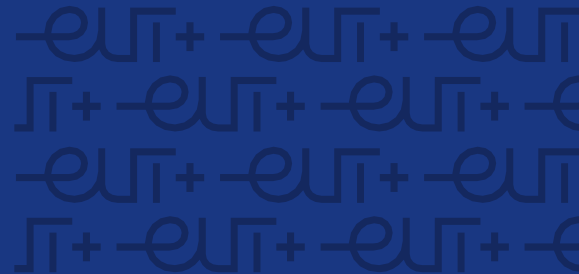
		better	better
		One third prefer to learn on their own rather than in groups	40% prefer to learn on their own rather than in groups
		Half of respondents would like more laptops and tablets available on long-term loan	29% of respondents would like more laptops and tablets available on long-term loan
		1.5% said they would like digital technologies to be used less on their course	17% said they would like digital technologies to be used less on their course

Conclusion

TELANTO's Platform was identified and selected during the EUt+ application phase and one of main tasks of the WP3.5 was to implement pilot courses using this PBL platform and evaluate its effectiveness and usefulness with feedback provided by lecturers and students. Unfortunately, the implementation of this task coincided with the COVID-19 pandemic which had a profound impact on the delivery of modules and the usage of virtual learning environments (VLEs) in our institutions. The most significant change was the rapid shift from traditional, in-person classroom instruction to online learning.

The idea of using the TELANTO's PBL platform was embraced positively and endorsed in principle by the relevant groups across EUt+. While this PBL platform offers a range of features and advantages, which was confirmed in this task, there were some concerns that transitioning from an existing VLE to a commercial LMS such as TELANTO or introducing it to new users may require additional training and resources.

To be better prepared for the implementation of such a PBL platform in the future, a survey regarding the digital experiences of staff and students was adapted and run within EUt+ in May 2023. More than half of academics reported their main support for use of digital tools coming from online videos and almost half of the respondents rated the support received from

their institution to develop the digital aspects of their role as good or excellent. Such information should prove useful in determining the best methods of supporting lecturers as they start to use TELANTO's platform. Moreover, two-thirds of students agreed that the use of digital tools and technologies makes their learning more enjoyable and helps them to understand better, but one-third prefer to learn on their own rather than in groups.

The COVID-19 pandemic significantly increased the use of digital technologies and online learning in higher education across Europe. While many staff appreciated the flexibility of remote teaching and wished for a more considered use of digital tools post-pandemic, students reported decreased engagement and enjoyment in the digital learning environment, mainly due to perceived inadequacies in online teaching quality and lack of interaction. Staff and students alike emphasized the need for better support, recognition, and a balanced approach to digital and traditional classroom-based learning. Students stressed the necessity for consistent digital learning experiences and improved facilitation, advocating for recorded lectures and more effective digital engagement.

In order to successfully introduce an online project-based-learning approach with groups of students from different campuses, we need to put in place the right supports to facilitate this collaboration. To date, while we have a good infrastructure in place, we have not been in a position to mobilize an adequately large community to experiment with this approach. The forthcoming second phase of EUt+ will build on the knowledge and experience acquired to make this original plan a reality.

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