



A4.2, O4 & A4.3, O3: Supply and Demand Workshops and educational director workshops



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Beneficiaries

- Aalborg University, Denmark
- Dublin City University, Ireland
- Kaunas University of Technology, Lithuania
- Linköping University, Sweden
- Tampereen Korkeakoulusäätiö sr, Finland
- Hamburg University of Technology, Germany
- Universidade de Aveiro, Portugal
- Universitat Autònoma de Barcelona, Spain
- University of Stavanger, Norway
- Università degli Studi di Trento, Italy
- University of Twente, The Netherlands

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Symbols, Abbreviations, and Acronyms

AAU	Aalborg University, Denmark
ABW	Awareness Building Workshop
CBL	Challenge Based Learning
DCU	Dublin City University, Ireland
EC	European Commission
ECIU	European Consortium of Innovative Universities
ECTS	European Credit Transfer System
EDCI	European Digital Credentials Infrastructure
KTU	Kaunas University of Technology, Lithuania
LiU	Linköping University, Sweden
SWOT	Strength, Weaknesses, Opportunities, Threats
TAU	Tampereen Korkeakoulusäätiö sr, Finland
TUHH	Hamburg University of Technology, Germany
UA	Universidade de Aveiro, Portugal
UAB	Universitat Autònoma de Barcelona, Spain
UiS	University of Stavanger, Norway
UNITN	Università degli Studi di Trento, Italy
UT	University of Twente, Netherlands
SDW	Supply and Demand Workshops

1 Supply and Demand

This report summarises the Supply and Demand Workshops (SDW) that were organised by the partner universities to engage various stakeholder groups in order to gain insight and discuss the five pillars of micro credentials i.e., Definitions and standards, Quality Assurance, Credits and recognition, Storage, Platforms, and Portability and Successful Uptake.

The key target audience consisted of Strategic staff and institutional leaders as well as the academic/lecturing staff. The Educational director workshop included centralised workshop and presentation on the ECIU's third micro-credential White Paper, and participants discussed an array of topics relating to the ECIU's values, strategic imperative in developing micro-credentials, and the potential of a distinctive European micro-credential approach.

1.1 Topics addressed during the SDW

During the supply and demand workshops, there were open discussions with the stakeholders' groups around each of the five pillars of the micro credentials, which have been summarized in Table 1 below.

Pillar(s)	Key Theme(s)	Key Discussion Item(s)
Pillar 1: Definitions and Standards	Awareness on digital credentials for learning Evolution of the digital credentials learning	Description of micro-credentials Criteria of defining micro-credentials Local context of micro-credentials and associated challenges
Pillar 2: Quality Assurance	Fitting the micro-credentials in a wider credential ecology	Key criteria for micro-credentials with suitable examples Concerns regarding QA processes
Pillar 3: Credits and Recognition	Diving demand of tangible credits and recognition in micro-credentials	Possibility of adopting digital credentials for courses outside of ECIU (apart from micro-modules and challenges)
Pillar 4: Storage, Portability and Platforms	Expected outcomes for using digital credentials for learning in terms of recognition of learning, students taking ownership of data, skill development and more.	Local technical specifications for implementing micro-credentials Extent of data personalisation Capacity of the institution to implement credentials
Pillar 5: Successful Uptake	Future of micro-credentials in each in organisation Information/assistance required by each organisation to start issuing micro-credentials	Type of students seeking to earn micro-credentials at each institution Identifying emerging skill gaps

Pillar(s)	Key Theme(s)	Key Discussion Item(s)
		Potential areas for collective project Uptake barriers

Table 1 Pillars, associated themes and discussion items

2 Key Findings and Lessons Learnt

There was considerable enthusiasm among both the university communities as well as external stakeholders about the ECIU approach. The key findings and lessons learnt from the workshops from each organisation has been summarised below.

Kaunas University of Technology, Lithuania

- A concrete practical plan on implementing ECIU micro-credentials and micro-modules is missing.
- When it comes to defining micro-credentials, the criteria to keep in mind whether the qualification obtained, and the program is valid and who provides the qualification.
- If the study results of the module could be identified with micro-credential, they can fit in the local context but for that to happen, the entire system needs to be redesigned.
- It also depends on the potential local employers on whether they see the benefits of micro-credentials and micro-competencies. However, some of the challenges include recognition of value (employers, students, NSAs, etc.), Validity period. Challenges due to differences between institutions - their hierarchy, documentation, organizational and academic culture, funding and access to resources; language barriers between teachers and students; human resources - the people needed to complete all the paperwork; Quality assurance; Implementation in non-formal education; Implementation for students.
- Certain key criteria for micro-credentials could include time accounting, assessing the acquisition competence, teacher feedback and applicability of acquired competencies in different contexts.
- The CBL could be presented at the beginning as a separate module for students during the first year, then CBL used in the subject modules.
- Concerns regarding QA processes include the resources supported by institution and the communication between different organizations
- The possibility of adopting digital credentials for courses outside of ECIU (apart from micro-modules and challenges) as the readiness of programs is not at the same level as modules.
- Micro-credentials should be recognized as they define the scope / depth of competence.
- Technical specifications to implement micro-credentials includes implementing international database (liek Lithuania); a database to check acquired microcredential; applicability of competencies, assessment received, short feedback from the teacher, how much time was spent on the acquisition of the competence, period of validity of the competence, institution from which it was obtained and its ratings
- Badges for non formal education are currently being implemented.
- institutions that have a larger workforce and focus on a very specific area would be attracted to the student to integrate those subjects into the curriculum.
- Skill gaps include communication and understanding of how the academy works time planning and lack of global competencies.
- Simple and user-friendly platforms could help learners to get microcredentials.
- Some barriers to uptake include approach, data protection regulation, encouragement for teachers and students to do so, coherence and sustainability of such systems for the future,

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shortage problems, clear need from employers, survey on how they would like to see competencies?

- in order for the innovation to take root, a very clear implementation plan, clarity and attractiveness for all stakeholders is needed. Not only is there a guaranteed failure, but also a certain loss of reputation.

Università degli Studi di Trento, Italy

- The digital credentials: what they are and how did they change during the past years in UniTrento
- The micro-credentials and the adoption plan in EHEA
- The micro-credentials in the Italian Higher Education Systems
- Certifications and recognitions of micro-credentials
- Projecting digital credentials and contents needed to build a micro-credential
- Types of digital credentials that can be issued
- How the digital credentials can be certified within the University
- differences between open badge, micro-credential and digital credentials
- The activities implemented and goals planned within ECIU
- types of challenges and micro-modules available for learners within ECIU
- How the credits achieved through the challenges and micro-modules can become a digital credential as a proof of learning under the ECIU
- Flexible curriculum, micro-modules and challenge-based learning have to be improved in order to build a European University
- Collecting a group of competences to create a competence passport that should be side by side the standard degree programme
- How the micro-credentials fit within the Italian university system
- Plan that could be conducted inside the University to issue digital credentials in the next future.
- “My open badge”, the open digital badge platform will be adopted by the University of Trento.
- “My open badge” is one of the three Platforms world-wide that has gained all three Open Badge certification (Issuer, Host e Displayer).
- It is connected to Europass, the CV and badge milestone and it can be integrated into the UniTrento system that manages student’s academic career.
- Diploma Supplement provides details and evidence of a study path leading to a degree only after the completion of the whole program; micro-credentials could give evidence of skills/competences and knowledges gained within the study path and/or in a complementary way to it.
- Language courses, training courses, activities aimed at fostering soft skills
- Some activities/courses offered during a degree program could be validated by themselves as micro-credentials as well as micro-credentials could be attended on top of a degree program.

University of Stavanger, Norway

The internal workshop and discussion on challenge-based learning focused on social entrepreneurship, problem solving techniques to develop guiding questions, activities, resources and identifying the solution, publishing results and reflections, evaluation via the six thinking hat.

University of Twente, The Netherlands

The workshops were conducted to set up the internal process to make micro-credentials a structural part of the organization’s strategy.

Aalborg University, Denmark

- An exploration of micro-credentials, ranging from the contemporary conversation of online modules through to artifacts from the participants' ordinary lives
- The development of a partial taxonomy for micro-credentials, inspired by and arising from the varied attributes of the micro-credentials identified in the first activity
- Different kinds of micro-credentials important to the future of AAU and affiliated challenges and suggestions

Universidade de Aveiro, Portugal

- The micro-credentials are worth for: Tailor-made training; Learning path flexibilization; Specialization versus broadening versus shift and Accumulation leading to degrees
- The micro-credentials should be created based on dialogue with society and companies and answering to concrete problems/needs
- Critical success factors for micro-credentials include Competence-drive; Trainers notability; Issuer notability and learning experience.
- Some threats include employers' culture in relation to training, excessive formalization and third parties (including employers) recognition.

Universitat Autònoma de Barcelona, Spain

- It is necessary to incorporate micro credentials in the framework of qualifications, in order to establish, in each case, at what level it corresponds, for future recognition.
- Currently, at a European level, there is a great diversity of interpretations on what must be understood about micro-credentials.
- The new RD 822 does not set conditions for micro-credentials, which is very positive and gives a lot of freedom.
- One challenge is that how the double record of degrees will be managed. On the one hand the RUCT and on the other EQAR.
- When a degree is accredited, some aspects to consider when evaluating are access, faculty level and content. The Short Learning programs are as optional undergraduate and master's degrees subjects if they meet the aforementioned requirements.
- it is important to go for the ex-post and leave behind the ex-ante. Important to have a guide in place to evaluate micromodules and challenges. This can be made possible if the stakeholders participate in quality assessment processes.
- For institutional accreditation, it is important to keep in mind that it is very difficult to land innovative things in the university (BOE, university regulations, etc.) and keeping in mind the stressed environment for the PAS and PDI, it is essential to be able to foresee possible problems, to know how to manage it.
- Considering the previous experience of the Short Learning Programs, presented by AQU, and the current legal framework, if the challenges could be an optional subject, or a new typology of subject, type practices, that could be incorporated into all the syllabus (degree and master) without entangling them in base to the content, only specifying the structure.

Hamburg University of Technology, Germany

- Common definition is of high importance – long discussion took part within the workshop, but addressed nearly all aspects of the given definition by the EU
- Unclearness between ECTS and Micro-credentials

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- Important to find system that commingles all aspects and systems within the ECIU University
- Common understanding needs to be communicated in the easiest way possible to not lose interest of e.g., industry partners (challenge providers) in the overall process.
- Some examples of current practices for adapting MCs include Non-technical offerings at the TUHH, Open Modules at TUHH, Bologna+ (Link CB) and Interfaces to current systems are key
- Some QA concerns include Contextual fitting to modules, ensuring trustworthy auditing, ensuring that each participant does deliver adequate learning outcomes in the end, setting concrete responsibilities and integration of Micro-modules in official curriculars.
- Difficult to claim ECTS of current systems (BS 180 ECTS, MA 120 ECTS – easier at Master level as more flexible learning offering exist)
- It needs to be ensured that new learning offering can be done within 2 to 3 years
- Quality assurance of materials and additional space needs to be established
- Some recognition types that can be used are transcript of records, learning agreements and additional certificates (ECIU certificates)
- There are many doubts around the compatibility of currently used systems within the ECIU University partner institutions
- Gaps linked to the adaption of externals who would like to uptake micro learning units at TUHH
- It is important to see how to integrate various externals to huge existing systems
- Interfaces to transcript of records
- Some of the barriers to uptake include Interfaces in-between systems, Interfaces to externals and learners who are not students, flexibility and interfaces in-between different online passports

Tampereen Yliopisto, Tampereen ammattikorkeakoulu, Finland

- Important to notice that ECIU micro-credentials is more or less an umbrella term. A digital credential is more than a credit in digital form. It is a collection of proofs managed digitally.
- There is no collective understanding of what digital credential is and what it contains. The EDCL data model/schema seems to become European standard to follow.
- ECIU should collectively pursue the common understanding and probably capture it as well. In Finland the term is used mainly for the short learning cycles instead of the digital credentials. The term is living all the time so different faculties and countries might have different understandings .
- Common understanding would allow wider impact to avoid confusion.
- Giving the credits practically is a big issue especially in a network level.
- ECIU challenges are a bit hard to manage since they don't have clear learning outcomes and structure beforehand
- There are existing recognition mechanisms to accept those credits so this might be an issue
- Prior learning rather flexibly is accepted so in Tampere the issues might not be too critical
- There's an expert group whose aim is to establish required mechanisms to ensure mutual recognition on ECIU University short learning cycles in all member universities. The group will start its work in December 2021. This will make common recognition smoother and easier.
- There is a need to validate soon with ECIU University about what a sufficient threshold is.
- TAU already has flexible courses today but if developing more new courses or modifying existing courses are to be flexible, should partnering with a MOOC provider be considered? so that the continuous admission and flexible time to finish the modules are not a burden on university admission system.
- One strategic question is that whether digital credentials be issued to TAU modules or only to modules offered through ECIU? If they are issued to TAU modules, it needs to be seen that how to

proceed to have (1) common way to get competence data recorded for each module both in module description and into the digital credential (2) centralized way to record achievements and assessments along with skills and competences to add to digital credentials.

- Another thing to consider is how the challenges to digital credentials are related and how are skills and competences with challenges based on the student's strengths and their role in the challenges associated?
- The more concepts are applied on a university-level / to really adopt digital credentials and implement modules strategically, there is a need to have the practicalities and concepts to be quite clearly defined. So probably a bit more piloting and experimenting need to take place before.
- Teachers and admins would need very clear guidelines how to approach these and also know what it means for them and how it will change their work or even what the learners get out of it.

Dublin City University, Ireland

- Defining a micro-credential is a key challenge.
- Key challenges to ponder are the different types of learning with the ECIU (challenges, micro-modules) yielding a micro-credential, recognition and certification, considering whether micro-credentials build to a learning pathway, represent a standalone offering, or both, and to what degree can a common standard across partners be adopted.
- Possible signature offerings include Data literacy, Creativity and design thinking, Sustainable approaches, Active Citizenship, and SDG-11 related sub-domains (engineering, social activism).
- Some midterm objectives to consider are exploring local contexts, aligning local and European developments, Defining and discerning a clear value proposition for learners, and adopting an ecological perspective to certification.

3 Conclusion

The Supply and Demand Workshops garnered a considerable amount of interest from all stakeholders and served as significant forums to have an open discussion regarding micro credentials, CBL and the ECIU approach. The impressive range of topics discussed and questions raised during these workshops assisted in concurrently informing the work being conducted in other work packages.

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