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Towards a European Skills Ecosystem:

Aligning Micro-Credentials,
Qualifications Frameworks
and Lifelong Learning
with ECIU University

Mairéad Nic Giolla Mhichíl

*ECIU University Micro-Credential Lead and
Director of Micro-Credential Strategy and
Innovation (Dublin City University)*



Introduction

National Qualifications Frameworks (NQFs) are central to delivering the European Union's ambition for a Union of Skills¹. They provide the transparency, comparability, and trust needed for learners and workers to move seamlessly across sectors, systems, and borders. Embedding micro credentials within NQFs is essential to deliver the EU's common approach to quality, transparency, recognition and portability for short, stackable learning. They are in place so that a range of key stakeholders such as education and training institutions, learners and employers can reliably understand level, workload, learning outcomes and assessment across borders.

The Council Recommendation on a European approach to micro credentials (2022) sets the building blocks for micro-credential inclusion at the national level in the education and training system of member States. It provides: an all-encompassing EU definition of micro-credentials, standard descriptive elements for micro-credentials (including learning outcomes, notional workload in ECTS, level in EQF/QF EHEA where applicable) and design/issuance principles which can explicitly enable lifelong learning and employability at scale. By aligning micro credentials to a country's NFQ via learning outcomes based level descriptors and credit (ECTS), systems can assure comparability, support stackability into larger awards, and facilitate recognition for further study and employment.

Implementation in Europe can also leverage other European tools and platforms, such as the Digital Credentials for Learning (Europass) so that micro-credential records are verifiable and portable across providers, sectors and countries, reinforcing trust and uptake. Positioning micro credentials clearly within a national framework operationalises the EU's quality and recognition architecture (ESG/EQF/ECTS/Europass) along with supporting interoperability of data when using the European Learning Model, turning flexible learning offers into credible, stackable pathways that advance mobility, inclusion and labour market responsiveness across the European Education Area. ECIU University, through its pioneering approach has operationalised many of these, and it now calls for explicit actions to be taken by European States to ensure that all forms of micro-credentials are included and levelled on national frameworks and to remove barriers for this to take place.

¹ https://commission.europa.eu/topics/competitiveness/union-skills_en



Mainstreaming Micro-Credentials withing European Education & Training Systems

One of the main outcomes of the MicroBol² project was the recommendation that micro-credentials be aligned to national qualifications frameworks. This principle is in line with the ECTS guidelines which state:



When a new programme is developed, the first decision typically concerns the level of the qualification to be awarded, which is defined on the basis of the relevant national legislation and existing qualifications frameworks (European, national, sectoral, institutional). (European Union, 2015, p.21)³

Significantly, guidance is specifically given in the ECTS user manual that modules and/or other educational components i.e., non-awards should follow the same principles as programmes. As all European NQFs are based on learning outcomes, the learning outcomes should adequately reflect the context, level, scope and content of the educational component (module) or programme. Annex 2 of the Council of the European Union Recommendation of Micro-Credentials (2022) sets out ten principles related to the implementation of micro-credentials. Under the transparency principle the following clearly indicates alignment of micro-credentials to NQFs:



Micro-credentials are measurable, comparable and understandable with clear information on learning outcomes, workload, content, level, and the learning offer, as relevant.

Higher Education Institutions are guided to use ECTS in the Recommendation and those providers using other systems of credit should describe learning outcomes and workload in terms with the principles as set out in the European Qualification Framework Recommendation (2017)⁴. Ultimately, the objective of this guidance is to allow for transparency, recognition and to facilitate the mobility of learners. This guidance is particularly relevant with respect to the potential of non-traditional providers entering the system and micro-credentials coming on stream, to facilitate lifelong learning.



Can micro-credentials be included in National Frameworks of Qualifications?

Micro-credentials should be included on national frameworks when they are designed around clearly defined learning outcomes. This aligns to most European frameworks core purpose which is focused on discerning the achievement and levelling of learning outcomes following engagement with a learning opportunity. Qualification frameworks generally exist to represent all forms of formal learning with some evolving to be more inclusive of other forms of learning. National frameworks must continue to adapt as a recognition and transparency tool, in line with European trends toward more progressive

² <https://microbol.microcredentials.eu/>

³ European Union, 2015. ECTS Users' Guide, Available at: https://education.ec.europa.eu/sites/default/files/document-library-docs/ects-users-guide_en.pdf, Last Access: February 2026

⁴ See Annex 5 EQF Recommendation (2017)
[https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017H0615\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017H0615(01))

frameworks, as highlighted in a recent Cedefop webinar⁵ and numerous Cedefop reports⁶ and publications in this area. The overarching objectives of the European Qualifications Framework (EQF) and national frameworks are to: promote transparency, comparability, and portability of learning outcomes across countries. This alignment allows learners to have their micro-credentials recognised beyond national borders, supporting mobility and employability in a European labour market. It also ensures that all EU States are part of the progressive movement toward flexible, modular learning pathways, where smaller units of learning—like micro-credentials—are formally integrated into qualifications frameworks.



Union of Skills and the Role of Micro-Credential in European Competitiveness and LifeLong Learning

National QA agencies play a pivotal role in the recognition of learning with respect to micro-credential modules and the realisation of the lifelong learning objectives of the NQF. To achieve Europe's commitments to lifelong learning and to realise the ambition as set out in the Union of Skills, NQFs must remain dynamic and responsive. Aligning with European trends toward more flexible and progressive frameworks as emphasised by numerous European reports, NQFs in conjunction with the European Qualifications Framework (EQF), play a critical role in promoting transparency, comparability, and portability of learning outcomes across borders within Europe. The recognition of micro-credentials throughout Europe, enhances learner and worker mobility and employability within the wider European labour market. As a result, NQFs function as core infrastructure for the European Education Area, strengthening mobility, supporting labour market responsiveness, and enabling citizens to build personalised, future proof learning pathways that contribute to Europe's broader economic and social resilience.

Across Europe, the integration of micro credentials into NQFs remains partial and uneven, despite growing political and policy momentum. By 2024, as reported in the Progress report on the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability (2025)⁷ only one quarter of national higher education systems had formally integrated micro credentials into their NQFs, while a similar share is still developing the necessary legislative and technical frameworks. Early movers such as Ireland, Spain, Croatia, Malta, Denmark, Iceland, and Sweden have aligned micro credentials with existing modular or partial qualification structures, however not all of these support the alignment of non-award micro-credentials to their NQFs.

Most Member States, however, are not yet ready for systematic NQF inclusion due to missing legal definitions, fragmented quality assurance, inconsistent credit practices, and limited cross system coordination based on the findings presented in this report. Where progress exists, it is often driven by pilot projects, recovery funded reforms, or existing modular traditions rather than coherent national strategies. Cedefop's⁸ analysis

⁵ Cedefop (2026)

<https://www.cedefop.europa.eu/en/events/role-nqfs-union-skills-your-perspective-matters>

⁶ Cedefop (2024). *Building a European qualifications map: development of national qualifications frameworks (NQFs) across Europe*. Luxembourg: Publications Office.

<http://data.europa.eu/doi/10.2801/883382>

⁷ <https://op.europa.eu/en/publication-detail/-/publication/d6e3213e-daf4-11f0-8da2-01aa75ed71a1/language-en>

⁸ Cedefop (2023). *Microcredentials and evolving qualifications systems*. Cedefop Research Paper No 89. Publications Office of the European Union. (Referenced in the European Commission's 2025 Progress Report on the Implementation of the Council Recommendation on Micro credentials.)

confirms this fragmentation: micro credentials are frequently treated as modules or partial qualifications, and full NQF integration requires expanding frameworks to cover non formal and labour market driven learning, a shift still underway in many systems.

Overall, Europe's NQF landscape for micro credentials is advancing but far from mature: promising national experiments coexist with major structural gaps. Without accelerated alignment on definitions, quality assurance, and NQF methodologies, micro credentials risk remaining innovative but peripheral, rather than becoming the recognised, portable skills currency envisioned by EU policy.



Recommended changes

To overcome current limitations, the NQFs should evolve and support the inclusion of all micro-credentials on them including non-award micro-credentials, based on the fundamental principles of learning outcomes. This shift would restore the NQF intended role as a recognition and transparency tool, supporting lifelong and continuous learning and strengthen the European Higher Education Area (EHEA) principles whilst enabling the delivery of the Union of Skills. Some key actions for national and European policy makers include:



The inclusion and levelling of micro credentials in all European NQFs
Ensure that all forms of micro credentials—award and non award—are explicitly recognised and levelled in NQFs using learning outcomes based descriptors and ECTS/EQF conventions. This is essential to deliver transparency, comparability, and portability across borders in line with the 2022 Council Recommendation.



Embedding micro credential recognition within national quality assurance and validation systems
Direct national QA agencies to formally include micro credentials within existing QA, RPL, and validation processes, ensuring that small volume learning is quality assured, trusted, and capable of stacking into larger qualifications, supporting lifelong learning and employability.



Leveraging European digital infrastructure to guarantee trust, verification and interoperability
Support the movement towards verifiable digital credentials (via Europass / European Digital Credential Platform) and aligned with the European Learning Model, enabling full portability across sectors and states and supporting Europe's ambition for a Union of Skills.



Accelerate coherent national strategies to overcome fragmentation and ensure system wide adoption
Move beyond pilots and isolated institutional initiatives by enacting national legislation, clear NQF methodologies, and cross system coordination mechanisms so that micro credentials become a mainstream, recognised component of education, training and labour market systems and not a peripheral innovation.



Conclusion

Achieving meaningful inclusion of micro credentials within Europe's National Frameworks of Qualifications is no longer an optional enhancement but a structural necessity for delivering the Union of Skills. NQFs provide the needed transparency, trust and portability required for flexible learning but also as central tools for the European labour market to function at system scale. Yet progress across Member States remains uneven, with legal, technical and quality assurance gaps preventing full adoption. To unlock the transformative potential of micro credentials for lifelong learning, competitiveness and labour market resilience, European countries must accelerate coherent national strategies, embed micro credentials within NQFs, and ensure their recognition across providers, sectors and borders. Only through such decisive action can Europe move from promising pilots to a fully interoperable skills ecosystem where stackable, high quality learning empowers individuals and strengthens the continent's competitiveness ambitions as set out in the Union of Skills. ECIU University and its partners stay ready to continue support the European micro-credentials movement.



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